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E. Dalton Smith del. Pub by R. Sweet Chelsea June 1 1825 [illegible]

ECHIUM australe.

Oval-leaved Vipers-Bugloss.

Natural Order. BORAGINEÆ. *Brown prodr.* 492.
Div. III. Fructus gymno-tetraspermus. Faux corollæ nuda. *Plantæ plerumque herbaceæ et asperæ.* Juss. gen. 130.
ECHIUM. Calyx 5-partitus. *Corolla* tubo brevi, limbo ampliore campanulato, oblique 5-lobo inæquali. *Stigma* 2-fidum. Flores *spicati aut spicato-paniculati, in spiculis secundi. Species quædam suffrutescentes.* Juss. loc. cit.

E. *australe*, caule tuberculato-hispido diffuso, foliis caulinis ovatis utrinque attenuatis, spica dichotoma, staminibus corollam subæquantibus calyce duplo longioribus.
Echium australe. *Lam. ill. p.* 413. *Pers. syn.* 1. *p.* 164. *Rœm. et Schult. syst.* 4. *p.* 720.

Annual. Stem spreading, forked, more or less branched, thickly clothed with small brown tubercles, and spreading hairs; from a foot to 18 inches in height. *Leaves* ovate, tapering at both ends, the upper side covered with minute rough tubercles, and both sides with small rigid hairs, strongly veined underneath: root leaves petiolate, stem ones sessile. *Spikes* secund, or the flowers all facing one way, lengthening as the flowers expand. *Bractes* leaf-like, sessile, cordate, tapering towards the point, very rough. *Calyx* 5-parted, increasing in size with the seeds; segments lanceolate, acute, unequal, the upper ones smallest, hispidly hairy. *Corolla* large, tubular, unequal, more than double the length of the calyx, of a reddish purple, changing to blue as it fades, strongly ribbed, hairy: limb unequally

5-lobed. *Stamens* 5, inserted in the tube, about the length of, or scarcely as long as the corolla: *filaments* very hairy: *anthers* incumbent. *Style* pale red, longer than the stamens, densely hairy. *Stigma* bifid, the points capitate.

Our drawing of this very handsome annual plant, was taken at the Nursery of Mr. Colvill, in August last; it had been raised from seed received from Germany, under the name that we have adopted. It is a native of the South of Europe, and succeeds well, sown in a warm border in the open ground, in rather a dryish situation, where it will ripen its seeds; in rich soil it will attain the height of 18 inches, in poorer soil it will be considerably less, but the branches spread round in all directions, so that the plants should not be too close together; the best time for sowing the seeds is the latter end of March, or beginning of April, according to the mildness of the season; if the plants come up too close together, some of them might be transplanted, but this should be done in moist weather.

1. Calyx. 2. Corolla spread open, to show the insertion of the Stamens. 3. Stamen detached, to show the hairy Filament. 4. The 4 naked Seeds, terminated with the hairy Style and forked Stigma.

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E. Dalton Smith del. Pub by R. Sweet Chelsea April 1 1825 R. Bailey

VIOLA eriocarpa.

Woolly-capsuled Violet.

Natural Order. VIOLARIÆ. *DC. prodr.* 1. *p.* 287.
VIOLA. Supra fol. 69.
Sect. III. *CHAMÆMELANIUM. Stigma* sphæroideo-capitatum, utrinque fasciculis pilorum onustum, foraminulo minuto sublaterali. *Stylus* compresso-clavatus. *Stamina* oblonga approximata. *Torus* planiusculus. *Capsula* sæpè trigona. *Folia seminalia* sæpius subrotunda. *Petala* 2, ungue barbata. *DC. prodr.* 1. *p.* 300.

V. *eriocarpa*, scabriuscula, caulibus assurgentibus flexuosis ramosis villosis, foliis cordatis acutis dentatis; interdùm reniformibus, stipulis ovatis subdentatis, sepalis lanceolatis acutis, calcare brevissimo subsaccato, fructibus dense villosis.
Viola eriocarpa. *Lewis am. journ.* 5. *n.* 1. *DC. prodr.* 1. *p.* 301.
Viola pubescens. *β eriocarpon. Nutt. gen. amer.* 1. *p.* 150. *Botan. regist.* 390.

Root perennial. *Stems* several, assurgent, flexuose, branching, villous, purple towards the base. *Leaves* cordate, acute, densely pubescent on both sides, toothed, points of the teeth curved inwards: lower leaves reniform. *Petioles* flattened and channelled on the upper side, and convex on the lower, villous, winged, the wing running down the stem to the next leaf. *Stipules* ovate or oblong, acute, more or less toothed, clasping the stem. *Peduncles* axillary, solitary, villous, with a small acute bracte about half way up. *Sepals* 5, unequal, lanceolate, acute, the upper one shortest, 2 side ones longest. *Petals* 5, yellow, 2 *upper ones* smallest, recurved, slightly bearded above

the unguis with a small tuft of glandular hairs, back tinged with purple, veined, veins branching: *side ones* also bearded, and marked with 2 blue stripes; *lower ones* largest, obovate, striped with numerous branching lines, and producing a short blunt spur or pouch at the base. *Stamens* 5: *anthers* 2-lobed, fixed by the back to the filaments, which terminates beyond them in a dry brown membrane. *Germen* densely villous. *Style* smooth, gradually thickening upwards. *Stigma* capitate, with a fascicle of white hairs on each side.

The present species is a native of North America, and several plants of it were received from thence by Mr. Colvill in 1823; from one of those our drawing was made last Summer: it is nearly related to V. *pubescens*, but differs from that species in its spreading branched stems, and large woolly capsules; it succeeds best in a dry border of light rich earth; for being of rather a succulent habit, it is liable to suffer from too much moisture; it continues to bloom nearly all the Summer, and ripens plenty of seeds; but those must be carefully watched, and should be gathered before the capsule bursts, or they will probably be lost, as the capsule generally bursts with an elasticity which occasions all, or the greater part of the seeds to spring out; the best time for sowing those is in March, whenever the weather is fine; the plants may also be increased by dividing at the root.

1. Calyx. 2. Petals. 3. The 5 Stamens. 4. Germen, terminated by the Style and capitate Stigma with a fascicle of hairs on each side. 5. The woolly Capsule. 6. The same spread open, to show the seeds.

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CARDUUS alatus.

Winged-stalked Thistle.

Natural Order. COMPOSITÆ. *Adanson fam.* 2. 103.
Sect. II. *CARDUACEÆ. Kunth Synops.* 2. *p.* 354.
3) *Carduaceæ veræ.* Kunth loc. cit. p. 363.
CARDUUS. Involucrum sphæroideum s. ovatum, imbricatum, rarius inerme. *Receptaculum* paleis setaceis tectum. *Antheræ* basi bisetosæ. *Stigma* nunc bifidum. *Achenia* ancipitia (v. quadrangularia.) *Pappus* inæqualis, pilosus, serrulatus v. puberulus. Herbæ *robustæ, inermes v. spinosæ;* perennes *dioicæ.* Folia *sessilia sinuata s. pinnatifida, dentata, basi sæpius per caulem decurrentia.* Flores *terminales, purpurei v. albi.* D. Don prodr. fl. nep. p. 167.

C. *alatus,* foliis subtus tomentosis subdentatis: radicalibus cordatis petiolatis; caulinis lanceolatis decurrentibus, capitulis corymboso-paniculatis, involucris globosis: foliolis lanceolatis squarrosis.
Carduus alatus. *D. Don loc. cit. in obs.*
Serratula alata. *Willd. enum. supp.* 56. *Link enum.* 2. *p.* 297.

Biennial. Stem about two feet high, much branched, *branches* furrowed, more or less tomentose. *Leaves* densely clothed underneath with a close white tomentum, the upper side smooth and slightly viscous, more or less toothed, very much scented like musk: root ones large, cordate, petiolate; upper ones lanceolate, undulate, decurrent. *Flowers* numerous, corymbosely paniculate, of a light rosy purple. *Peduncles* long and slender, furrowed. *Bractes* 2 or 3 on each peduncle, small, lanceolate or sometimes spatulate. *Involucre* campanulate, imbricate, leaflets numerous, unarmed,

lanceolate: lower ones short, bluntish, reflexed, of a light green, sometimes tipped with red: upper ones long, acute, dark purple. *Receptacle* flat, paleaceous: *chaff* long, rigid, subulate. *Florets* numerous, tubular, slender at the base, and ventricose upwards, deeply divided into 5 segments, which are lanceolate, bluntish, connivent. *Stamens* 5, *filaments* distinct: *anthers* exserted, all connected, each with two long aristas at the base. *Style* longer than the stamens, quite smooth, of a pale colour. *Stigma* bifid, purple, the segments spreading. *Seed* quadrangular, tuberculate, crowned with a radiate pappus of toothed or fringed hairs.

In referring the present plant to the genus Carduus, we have done so in agreement with Mr. D. Don's Prodromus Floræ Nepalensis, where the best character of the genus, in our opinion, is given; we have been long anxiously expecting the above work, so many plants having been introduced from Nepal within those few years, and the greater part of them unnamed, so that a work of the kind was absolutely wanting, particularly as so few of the Nepal plants are noticed by Dr. Wallich in the Flora Indica, now publishing under his inspection; and which are not to appear till the end of that work, which will probably be several years before it is completed. We consider the above publication of Mr. Don's as an excellent little work, and does the author much credit; and as Mr. Lambert has received a great number of specimens from Nepal since it was published, we hope before long to see a new edition.

The present plant is a hardy biennial, flowering the second year after being sown; it will succeed well in the common garden soil, in any open situation, and requires no care, but to be kept clear of weeds. Drawn at the Nursery of Mr. Colvill, last Summer.

1. Involucre split through the middle, to show the chaffy receptacle. 2. Scales of the Chaff. 3. Floret. 4. The 5 Stamens showing their united anthers, each with 2 aristas at the base. 5. Seed crowned with a radiate pappus of toothed hairs, and terminated by a Style and bifid Stigma.

E. Dalton Smith del. Pub. by R. Sweet Chelsea April 1 1825 A. Bailey

ADENOPHORA coronopifolia.

Buck's-horn leaved Adenophora.

Natural Order. CAMPANULACEÆ. *Brown prodr.* 1. *p.* 559.
ADENOPHORA. Alabastra semper clavata. *Ovarium* campanulatum. *Calyx* quinquepartitus: laciniis acutis, nunc integerrimus, nunc glanduloso-dentatis. *Stylus* glaber aut pubescens, supra incrassatus, et terminatus stigmate brevi, crassiusculo. *Styli basis* circumdatur glandulâ, ex ovarii apice in vaginam cylindraceam aut annularem, longiorem aut breviorem, productâ. *Stamina* stylo breviora, basi suâ latâ spathulæformi, uninerviâ et ciliatâ in cylindrum, glandulam obtegentem, connivent et quasi cohærent, atque glandulam superne operientia desinunt in apicem filamenti glabrum, capillarem, antheram rectam oblongo-linearem gerentem. *Corollæ* profunde campanulatæ, glabræ. *Capsulæ* ad basin triporosæ. *Semina* majuscula, planiuscula, fusca.—Radices *perennes, aut bienni-perennes, napiformes, sæpe dulces et edules, albæ.* Folia radicalia, *quæ plerumque primo, et in perennibus interdum secundo anno reperiuntur, semper sunt longe petiolata, reniformi-subrotunda, grosse serrata, glabra.* Caules *plerumque numerosi proveniunt ex eadem radice, basi sunt nudi, et folia ima plerumque habent breviora reliquis, fere Veronicarum instar: sunt vero folia aut omnino verticillata, aut sparsa et hinc inde in modum verticillorum approximata, sessilia aut petiolata, nunc integerrima et angustissima, nunc lanceolata, ovata et magis minusve serrata, numerosa.* Flores *nutantes, dispositi in racemum aut paniculam terminalem, multifloram, ramis interdum, secundum nisum generis, verticillatis.* Fischer. Adumbratio generis Adenophoræ. p. 4.

A. *coronopifolia,* caule stricto, foliis sublanceolatis grosse dentatis, paniculâ subracemosâ, calyce integerrimo, stylo incluso. *Fisch. loc. cit. p.* 5.

Adenophora coronopifolia. *Fisch. Index Plantarum anno* 1824. *in Horto Botanico Imperiali Petropolitano vigentium. p.* 2.

Campanula coronopifolia. *Rœm. et Schult. syst.* 5. *p.* 157. *Steud. nomen, p.* 141.

Perennial. Stems several from the same root, from 6 to 15 inches in height, rather slender, upright, or a little flexuose, smooth and glossy, tinged with purple at the base. *Leaves* from the root on long footstalks, roundly-oval, sharply but unequally toothed, smooth

and glossy, strongly and numerously nerved underneath, reticulately veined. *Petioles* smooth, channelled on the upper side, and rounded on the lower, purple at the base: *stem-leaves* lanceolate, lower ones bluntish, the others acute, all sharply serrated with rather distant teeth, attenuated at the base into a sort of footstalk. *Racemes* terminal, from 1 to several flowered, according to the strength of the plant. *Flowers* nodding, of a delicate light blue. *Pedicles* and *Germens* tinged with purple. *Calyx* 5-parted, segments lanceolate, acute, entire, fringed with glandular hairs. *Corolla* campanulate, deeply 5-lobed; lobes spreading, acute. *Stamens* 5, short, surrounding the style, the base of the filaments dilated and flat, single nerved, and fringed with short glandular hairs: *anthers* acute. *Style* pubescent, thickened upwards, scarcely as long as the corolla, surrounded at the base by a short membranaceous annular ring. *Stigma* short and thick, 3-lobed, the lobes at first closed, afterwards spreading.

This beautiful perennial plant is a native of Dahuria; the one from which our drawing was taken, was raised in 1822, at the Nursery of Mr. Colvill, from seed sent by Dr. Fischer, who has separated the present very natural genus from the overgrown one of Campanula; to this genus belongs, besides the present species, A. *verticillata*. A. *marsupiiflora* (Campanula coronata. *Bot. reg.*) A. *Gmelini*. A. *denticulata* (Campanula tricuspidata *R. S.*) A. *latifolia*. A. *Lamarckii*. A. *stylosa*. and A. *communis* (Campanula liliifolia, suaveolens, &c.)

The present species requires to be planted in a warm border, in light rich soil, and a dryish situation, as it is likely to suffer from too much moisture; it will also thrive well in a small pot, but will not grow so strong; the plant from which our drawing was made, was cultivated in the latter way.

1. Calyx, and inferior germen. 2. Corolla spread open. 3. The 5 Stamens surrounding the Style, showing how they are connected by their glandular hairs. 4. Stamen separate, showing the fringed filament. 5. Style surrounded at the base by an annular membrane, and terminated by a spreading 3-lobed Style. 6. Stigma with the lobes closed.

TAXANTHEMA speciosa.

Plantain-leaved Sea-Lavender.

Natural Order. PLUMBAGINEÆ. *Brown prodr.* 425.
TAXANTHEMA. Supra fol. 37.

T. *speciosa*, scapo ramoso tereti, ramis ancipitibus alatis, floribus imbricatis, foliis obovato-cuspidatis mucronatis margine cartilagineis. *Willden. sp. pl.* 1. *p.* 1527. sub Statice.
Statice speciosa. *Pers. syn.* 1. *p.* 333. *Hort. Kew. ed.* 2. *v.* 2. *p.* 182. *Botan. magaz.* 656. *Rom. et Schult.* 6. *p.* 787.

Root perennial? *Leaves* spreading in a radiate form, rigid, obovate, attenuated at the base, terminated in a sharp mucro, margins cartilaginous, of a glaucous or rather white powdery colour, purple at the base. *Scape* paniculately branching, naked and round at the base, from 6 inches to a foot in height; *branches* winged, 3-sided, at the base of each is a scariose stipule or bracte, which is cordate, cucullate, and terminated with an awl-shaped point. *Flowers* of a bright pink, in dense interrupted imbricate secund spikes. *Bractes* as on the scape, but smaller, about the length of or scarcely as long as the calyx. *Calyx* tubular, funnel form, with a white scariose, 5-plaited, 5-toothed limb, the lower part green with 5 purple stripes down the tube. *Corolla* of 5 petals; *petals* with a long unguis, and spreading emarginate limb. *Stamens* 5, inserted in the claws of the petals. *Styles* 5, each terminated by a small capitate *Stigma*.

Our drawing of this handsome plant was taken last Summer, at the Garden belonging to the Apothecaries'

Company, at Chelsea, where it had been raised the year before by Mr. Anderson, from seeds that he received from Dr. Fischer. It has been long lost to our collections, till now again introduced. We believe the reason of its present scarcity, is from its suffering from our damp atmosphere, as its native country is much colder than ours, being a native of Russia. We would recommend its being grown in a dry elevated border of light loamy soil; and it would also be well to keep some plants of it in pots, and preserve them in frames through the Winter; they can then be turned in the borders in Spring, where they will flower, and ripen their seeds, if properly managed. We have generally seen this species marked as a biennial plant, but from its habits we think there can be little doubt but it is perennial; and from its being so apt to rot in Winter, is the reason that it is considered as biennial. Seeds, if sown as soon as ripe, will produce plants, some of which will flower the following season; whereas if the seeds are not sown till the Spring following, it will be another year before those will bloom; it is therefore better to sow some at both seasons. We would prefer raising them in pots, and, soon after the seedlings are up, transplant them singly into small pots, from which they can, when of sufficient size, be turned into the borders, without missing their removal.

1. Bracte. 2. Calyx, showing its scariose border. 3. The 5 Petals, with the Stamen inserted in the base of each. 4. Germen terminated by the 5 Styles and small capitate Stigmas.

CROCUS pusillus.

Small Crocus.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.
CROCUS. Spatha plerumque 2-valvis: valvula interior multo angustior. *Perianthium* petaloideum, infundibuliforme: tubo longissimo, basi subterraneo; limbo 6-partito, regulare. *Stigmata* 3.—Radix *tuberoso-tunicata.* Foliis *gramineis canaliculatis.* Flores *radicales, subsolitarii.*

C. *pusillus,* foliis flore longioribus, perianthii laciniis exterioribus oblongo-lanceolatis acutis; interioribus ovatis sub-emarginatis multo majoribus.
Crocus pusillus. *Tenore. Catalogus plantarum horti regii Neapolitani,* 1813, *p.* 31.

Root tunicate, nearly globular, clothed with a smooth glossy brown shell, and producing a long fusiform white tuber on one side when growing, and numerous slender fibres on the other side. *Sheath* 2-valved, white and membranaceous, scarcely an inch long, roundly obtuse. *Leaves* erect, smooth, overtopping the flowers, grass-like, taper-pointed, deeply channelled on the upper side, and marked with a longitudinal white stripe, underneath bluntly keeled, margins a little rolled back. *Flowers* generally 2, clothed at the base and nearly half way up with a white glossy membranaceous sheath. *Perianthium* funnel-form, with a long, slender, bluntly angular tube; limb petal-like, 6-parted, spreading, of a pure white, with a pale yellow bottom; segments concave, outer ones oblong-lanceolate, acute, with 3 bright purple stripes at the back, inner ones ovate, rounded or slightly emarginate, of a pure white,

nearly double the size of the outer ones. *Stamens* 3, inserted in the mouth of the tube: *filaments* smooth, flattened on the inner side and rounded on the outer, about the length of the *anthers*, which are sagittate, 2-celled, bursting on each side to discharge the pollen: *pollen* yellow. *Style* smooth. *Stigmas* 3, slightly spreading, crested a little, of a bright orange colour, about the length of, or a little longer than the stamens.

The present plant is nearly related to C. *biflorus*; but in that the segments of the perianthium are equal, and all of them rounded, and the outer ones are much more striped with purple, the flowers are double the size, the tube is also much larger in proportion, and more rounded. Mr. Colvill received the plants from which our drawing was taken, last Autumn, from Professor Tenore, with several other curious bulbs; amongst them were his *Narcissus præcox* and *unicolor*; the former proves to be N. *italicus*, and the other N. *papyraceus*. Amongst the plants received from him are his *Iris fugax*, and I. *scorpioides*; the former is a Moræa without doubt, and related to M. *Sisyrinchium*; of this we hope to publish a figure in our next Number; the other, we fear, will not flower this season, but the plants are thriving very well. Several Orchideous plants have also been received from him, some of which we hope will flower this season.

Our present subject is a native of Naples, and succeeds well in the open borders, with the same management as the other species; it is a very early bloomer, our drawing being made from plants in full flower, the latter end of February.

1. Perianthium spread open to show the insertion of the Stamens, every other segment cut off. 2. Stamen detached. 3. Germen terminated by the Style, and 3 Stigmas.

NICOTIANA glutinosa.

Clammy Tobacco.

Natural Order. SOLANEÆ. *Juss. gen.* 124.
Sect. 1. *Pericarpium capsulare.*
NICOTIANA. Calyx tubuloso-campanulatus, quinquefidus. *Corolla* infundibuliformis aut hypocrateriformis; limbo quinquelobo. *Stamina* 5; *antheræ* longitudinaliter dehiscentes. *Stigma* capitatum. *Capsula* bilocularis, calyce persistente tecta, septicido-bivalvis; *valvæ* bipartibiles; *placentæ* discretæ, a dissipimento distantes. *Semina* creberrima, minuta. Herbæ *aut* suffrutices *sæpissime glutinoso-pilosa.* Flores *terminales, racemosi aut paniculati, albidi, virescentes aut purpurascentes.* Kunth. synops. tom. 2. p. 146.

N. *glutinosa,* foliis petiolatis ovatis acuminatis cordatis hirto-pilosis glutinosis, floribus racemosis secundis, corollis subinfundibuliformibus subringentibus calyce duplo longioribus: lobis acutiusculis. *Kunth. synops.* 2. *p.* 147.
Nicotiana glutinosa. *Willden. sp. pl.* 1. *p.* 1015. *Ruiz. et Pav. Fl. Peruv.* 2. *p.* 16. *Pers. syn.* 2. *p.* 217. *Andrews's repos.* 484.

Annual. Stem erect, much branched, thickly clothed with short unequal glutinous hairs. *Leaves* petiolate, cordate or cordately ovate, taper-pointed, undulate, entire, thickly clothed on both sides with short hairs, glutinous: in the bottom leaves the sinuses are overlapped at the base; in the upper ones distinct. *Petioles* shorter than the leaves, convex on both sides, very slightly decurrent, thickly clothed with glutinous hairs, as are the peduncles and calyx. *Racemes* long, many-flowered, at first nodding, afterwards becoming erect *Flowers* leaning to one side, or sometimes two-

ranked or distichous. *Bractes* alternating with the flowers, linearly lanceolate, acute, very hairy, margins reflexed. *Pedicles* cylindrical, about the length of the segments of the calyx. *Calyx* campanulate, 5-cleft, angular, segments unequal, lanceolate, scarcely acute, keeled, the upper one largest. *Corolla* deeply 5-lobed, ringent, much inflated at the mouth, hairy on the outside, of a dull reddish copper-colour, tube very slender towards the base: lobes scarcely acute, spreading, glossy and channelled on the inner side, and keeled on the outer. *Stamens* 5, inserted in the base of the tube, about the length of the corolla: *filaments* densely villous near the base, and smooth upwards: *anthers* incumbent, 2-celled. *Germen* smooth, conical, 2-celled. *Style* smooth, about the length of the stamens. *Stigma* capitate, 2-lobed.

This fine species of Tobacco, is one of those that may be considered as rather a tender annual, the seeds of which should be sown on a gentle hot-bed, from which they may be planted into the open borders; but this should be done in moist weather, except the plants are first transplanted singly into small pots, and have taken fresh root, in a frame or other sheltered situation; from the pots they may be turned into the open borders when convenient, giving them a good soaking of water when first turned out; if planted in rich soil, it will grow to the height of 18 inches or 2 feet, in poorer soil it will be considerably less; if the seeds are sown in the open ground, they should be sown about the middle of April, in a warm border.

Our drawing was taken at the Nursery of Mr. Colvill, last Autumn.

1. Calyx. 2. Corolla spread open, to show the insertion of the Stamens. 3. Stamens detached, showing the hairy filament. 4. Germen terminated by the Style, and 2-lobed capitate Stigma.

May 1 1825

LOPEZIA coronata.

Coronet-flowering Lopezia.

Natural Order. ONAGRARIÆ. *Juss. ann. mus.* 3. *p.* 315.
LOPEZIA. Calyx superus, quadripartitus, deciduus. *Corolla* tetrapetala, irregularis. *Stamina* 2; altero sterili, petaliformi. *Anthera* oblonga, incumbens. *Stigma* capitatum. *Capsula* subglobosa, quadrilocularis, apice tantum loculicido-quadrivalvis, nuda. *Placenta* centralis dissepimentis semper adnata permanet. *Kunth. synops.* 3. *p.* 389.
Herbæ *erectæ, ramosæ.* Folia *alterna, dentata.* Flores *terminales racemosi, aut axillares solitarii, longe pedunculati.* Corollæ *purpureæ.*

L. *coronata*, foliis lucidis, caule angulato e petiolis decurrentibus, corymbis inferne foliosis. *Hort. Kew. ed.* 2. *v.* 1. *p.* 10.
Lopezia coronata. *Andrews's reposit.* 551. *Rœm. et Schult. syst.* 1. 34. *Link enum.* 1. *p.* 6.

Annual, much branched at the base. *Branches* from 1 to 2 feet long, spreading in all directions; angular, occasioned by the decurrent footstalks of the leaves, smooth, or slightly pubescent at the points, with some small red glands interspersed here and there, likewise on the petioles. *Leaves* scattered, alternate, opposite or in whorls, elliptic or ovate, often oblique at the base, shallowly and remotely toothed, glossy; nerves numerous and prominent underneath, simple. *Petiole* shorter than the blade, channelled on the upper side, and convex on the lower, pubescent. *Peduncles* axillary, solitary, 1-flowered, very slender, smooth and glossy, of a purple colour, erect when in flower, but declining when in fruit. *Flowers* crowning the branch in a corymb-like form, owing to the closeness of the

leaves; but as the branch lengthens, they are at a greater distance from each other. *Calyx* 4-parted, superior; *segments* narrow, concave, bluntish, of a reddish colour, lower one at a distance from the others, and much larger. *Corolla* of 4 petals; the two upper ones linear, bluntish, of a bright lilac, pointed a little above the base, and on each joint is a small pellucid gland: two side ones larger, with long claws; lamina roundly obovate, of a light lilac, with a dark red mark at the base, which extends part of the way down the unguis. *Stamens* 2, inserted in the receptacle: 1 fertile and 1 sterile, the fertile one enclosed in the other: *filament* wide at the base, and grooved inwards, so as partly to enclose the style; upper part, near the anther, slender, elastic, and springing back as soon as clear of the other; the anther then discharges its pollen: *anthers* 2-celled, attached to the filament at the base: barren stamen white, obovate, concave, connivent, or sides folded in, enclosing the fertile stamen and pistil, but as soon as touched it springs back with an elasticity which sets them at liberty. *Germen* below the calyx, of a glossy green. *Style* smooth, at first shorter than the stamen, but growing beyond it. *Stigma* capitate, slightly bearded. *Capsule* globular, berried.

This curious annual plant will succeed well if sown in a warm border, about the middle of April; it is also well to sow some seeds of it on a gentle hot-bed, to bring them forward earlier, as they can then be planted in the flower borders, where required; in rich light soil they will attain the height of 18 inches or 2 feet; it is very well worth a place in the garden, on account of its singular structure, for, by touching the barren stamen, it immediately springs back with an elasticity, in much the same manner as the stamens in Schizanthus.

Drawn at the Nursery of Mr. Colvill, last Summer.

1. Calyx, showing the unequal spreading segments. 2. The 4 Petals, the 2 upper ones showing the gland on the joint. 3. Barren Stamen. 4. Fertile Stamen. 5. Style, terminated by the bearded Stigma.

HELLEBORUS dumetorum.

Bush Hellebore.

Natural Order. RANUNCULACEÆ. *DC. syst. v.* 1. *p.* 127.
Tribus IV. *HELLEBOREÆ.* Æstivatio calycis et corollæ imbricata. *Petala* nunc 0, nunc irregularia bilabiata nectarifera. *Calyx* petaloideus. *Carpella* capsularia dehiscentia polysperma. *DC. p.* 130.

HELLEBORUS. Calyx persistens 5-sepalus, sepalis subrotundis obtusis magnis sæpè viridibus. *Petala* 8-10 brevissima tubulata infernè angustiora nectarifera. *Stamina* 30-60. *Ovaria* 3-10. *Stigmata* terminalia orbiculata; *capsulæ* coriaceæ; *semina* duplici serie disposita elliptica umbilicata.—Herbæ *perennes duræ coriaceæ glabræ aut vix sub foliis pubescentes;* folia radicalia *petiolata palmatim pedatimve secta, segmentis oblongis dentatis;* caulina *sæpe nulla, formâ variâ;* caules *nunc ramosi multiflori foliosi, nunc subramosi bracteas sub ramis gerentes pauciflori, nunc aphylli uniflori.*

VIR. Radices intensè purgantes cholagogæ, in maniâ, epilepsiâ, hydropysiâ et hepaticis morbis olim et nunc celeberrimæ.

HAB. Species omnes hyeme aut vere florentes, aspera dumetaque submontana Europæ mediæ et Orientis habitant, præsertim à Pyrenæis ad Caucasum. *DC. l. c. p.* 316.

§. II. *Caule pauciflora subdichotomo folia floralia subsessilia fissa aut incisa gerente.*

H. *dumetorum,* foliis radicalibus glaberrimis pedatisectis; caulinis subsessilibus palmatisectis, caule tereti bifidè ramoso, sepalis calycinis subrotundis viridibus. *DC. syst.* 1. *p.* 320. *prodr.* 1. *p.* 47.

Helleborus dumetorum. *Waldstein et Kit. ex Willden. enum. v.* 2. *p.* 592. *Hort. sub. lond. p.* 129. *Link enum.* 2. *p.* 98.

Stem short, round, from 4 to 6 inches in height, forked: *branches* leafy, obsoletely 3-angled, sometimes divided, each branch producing from 1 to 3

flowers. *Leaves* smooth and glossy, of a pale green, those at the root on a long footstalk, pedate, spreading; stalk ones sessile, or with a very short flat footstalk, palmately parted: segments lanceolate acute, the middle one longest, all very sharply and sometimes doubly serrated, entire at the base. *Peduncles* flattish, nodding, thickened upwards. *Flowers* of a bright green, spreading open. *Sepals* 5, obovate, with rounded points. *Petals* 8 to 10, short, erect, tubular, of a yellowish green, with broad emarginate or forked points, narrow and nectariferous at the base. *Stamens* numerous: *filaments* unequal in length, more or less spreading, flattish, of a pale yellowish green: *anthers* ovate, slightly emarginate, two-celled: *pollen* white. *Carpella* 3 to 5, each terminated by a smooth, channelled, recurved *Style* and small orbicular *Stigma*.

Our drawing of this curious and pretty species was made at the Apothecaries' Company's Garden, the beginning of March, when it was in full bloom in the open ground; it is a native of Hungary, and has been introduced to this country within a few years; its being so early a bloomer makes it a very desirable plant, although its flowers are not so showy as some others, yet their singularity and early flowering make up for that deficiency. It only attains a few inches in height, so that it should be planted near the front of the flower borders. It succeeds well in the common garden soil, and will thrive in a shady situation, or amongst bushes where many other plants would not survive. The only way of increasing it is by dividing at the root, or by seeds which are sometimes ripened; those should be sown as soon as gathered; the young plants will then come up, and be attaining strength before the Winter sets in.

1. The 5 Sepals. 2. Side view of the Stamens, with 4 of the Petals in front. 3. The 8 Tubular Petals. 4. Stamens. 5. The 4 Carpella, each terminated by a Style, and small capitate Stigma.

MORÆA Tenoreana.

Tenore's Moræa.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.

MORÆA. Inflorescentia pauci-pluriflora, fasciculata: *spathis* communi bivalvi involutis distincta; rarò uniflora, rariùs in spicam educta. *Perianthium* hexapetalo-partitum s. tubuloso-sexfidum: *laciniis* obversis, rotatis s. infernè conniventibus, alternis consimilibus; *exterioribus* ungue sæpè barbato, sæpè foveolâ ad basin, laminâ nunquam erectâ; *interioribus* angustioribus, rarò minimis v. nullis, interdùm omninò erectis. *Stylus* triquetro-filiformis, erectus, liberus. *Stigmata* 3, petaliformia, trifaria anticè fornicata, posticè carinata, bilabiata labio *interiore* bifido reflexo *exterius* breve retusum multotiès v. fermè non excedente: raro lineari-radiata, bipartita, segmentis convoluto-filiformibus. *Filamenta* perianthii v. limbi disco imposita, libera s. partim v. omninò connata. *Antheræ* erectæ, extrorsæ, lineari-oblongæ, faciebus stigmatum appressæ, *vel* segmentis intersertæ. *Capsula* membranacea, ovato-globosa ad prismatico-columnarem, 3-loocularis, loculis biseriato-polyspermis, 3-valvis, valvis medio septigeris. *Semina* septi margini interiori utrinque annexa, rotunda s. angulato-pressa; *albumen* corneum.

Radix *bulbo-tuber, integumento externo senescente putamineo-fibroso, reticulato-rimoso;* folia *radicalia pauca, transversè bifaria, fistuloso-vaginantia, inde convoluto-lorata, sæpius caudato-cuspidata, rarò plura et acutè canaliculata, nunquàm collaterali-disticha;* caulis *culmaceus, vaginoso-foliatus, simplex ad ramosissimum rami è vaginâ ad articulos, solitarii, interdùm aggregati, rarò divisi;* flores *terminales, pedunculati, sæpiùs fugaces.* MORÆA iridioides *ad* IRIDEM *cum nomine* moræoidis *rectius transferenda.* Ker Bot. reg. 312.

M. *Tenoreana,* foliis radicalibus binis longissimis bifariam divergentibus involutis extus striatis, scapo geniculato subramoso pluriflora, perianthium sexpartitum, laciniis emarginatis cum acumine: exterioribus basi tuberculato-barbatis plus duplo majoribus.

Iris fugax. *Tenore flor. neapolit.* 1. 15. *t.* 4.

Bulb-tuber about the size of a large nut, clothed with a coarse light brown reticulated cartilagineo-fibrous shell. *Leaves* 2, from a foot to 15 inches in length, tapering to a fine point, bifariously spreading,

smooth and glossy, sides folded in, so as to leave a large channel in the centre, outside striped with numerous small longitudinal lines. *Scape* pointed, more or less branched, from a foot to 15 inches high, from each joint grows a sheath, about 3 inches long. *Sheaths* striped with numerous dark green lines, which are crossed here and there, the lower part tubular, clasping the stem, the upper part membranaceous, and tapering to a point. *Perianthium* with a long slender nearly cylindrical tube, of a greenish white, irregularly marked with a few red streaks; divided above into 6 petal-like segments, of a bright blue colour: *outer segments* unguiculate, from about the middle ovate, reflexed a little, the points broadly emarginate, with a small mucro in the middle, from the bend to the base tuberculately bearded in a longitudinal yellow line, and spotted with purple on each side, terminated above the bend in a large white patch, from which a purple line runs to the point: *inner segments* scarcely half the size of the outer ones, also emarginate with a mucro at the point. *Stamens* 3: *filaments* smooth. *Anthers* linear, sharp-pointed. *Pollen* white. *Style* slender, smooth, terminated by 3 forked petal-like *Stigmas*.

Our drawing of this interesting species was taken at the Nursery of Mr. Colvill, from a plant that had been given him in Autumn by Professor Tenore: it is a native of Naples, and requires to be planted in a dry warm border of light sandy soil, or, if planted in a pot, in an equal mixture of light turfy loam, peat, and sand, and protected in a frame in Winter, it will succeed very well. This species is nearly related to *Moræa Sisyrinchium*, but differs sufficiently in the shape of its petals, and its membranaceous, not leafy sheaths; it continues flowering in succession for a considerable time; the flowers last in bloom about as long as the other species of the genus, the name *fugax* is therefore very inappropriate.

1. One of the outer segments of the Perianthium. 2. One of the inner segments. 3. The 3 Stamens. 4. Style terminated by 3 forked petal-like Stigmas.

SILENE alpestris.

Austrian Catchfly.

Natural Order. CARYOPHYLLEÆ. *DC. prodr.* 1. *p.* 351.
SILENE. Supra, fol. 58.
Sect. VI. *RUPIFRAGA. Caulescentes. Caules* stricti. *Pedunculi* filiformes. *Calyces* campanulati vel cylindrici.

S. *alpestris,* petalis quadridentatis, caule dichotoma, capsulis ovato-oblongis, foliis lineari-lanceolatis glabris erectis, pedunculis viscidis. *Willden. sp. pl.* 2. *p.* 707. *Jacq. aust.* 1. *p.* 60. *t.* 96. *Pers. syn.* 2. *p.* 500. *DC. prodr.* 1. *p.* 375.
Lychnis alpestris. *Linn. supp.* 244. *Link enum.* 1. *p.* 432.

Perennial. Stems numerous, spreading, much branched; branches ascending, slightly hairy. *Leaves* linearly lanceolate, rather pointed or sometimes bluntish, attenuated at the base and slightly fringed, smooth or very slightly pubescent. *Flower-stalks* forked, cylindrical, much divided. *Peduncles* slender, viscid. *Calyx* tubular, slightly bellied, terminated with five blunt membranaceous concave segments. *Petals* 5, white, unguiculate; limb obcordate, ending in four blunt teeth; fauce crowned with two flat teeth. *Stamens* 10, every other one inserted at the base of each petal, the other 5 in the receptacle, all exserted beyond the mouth of the corolla: *anthers* incumbent. *Germen* smooth. *Styles* 3, white, blunt, spreading.

This pretty plant is well adapted for the ornamenting of rock-work; it will also succeed well in a dry border of light sandy earth, and may also be cultivated with advantage in a small pot of light rich soil, where

ANEMONE stellata. β *purpurea.*

Star Anemone, purple variety.

Natural Order. RANUNCULACEÆ. *DC. syst.* 1. *p.* 129.

Tribus II. *ANEMONEÆ. Calycis corollæque* æstivatio imbricata. *Petala* 0, aut plana. *Carpella* 1-sperma indehiscentia in caudas mucronesve sæpius desinentia. *Semen* pendulum.— Folia *radicalia aut alterna.* DC. loc. cit.

ANEMONE. Involucrum trifolium à flore distans. foliis varie incisis. *Calyx* 5-15-sepalus petaloideus. *Petala* 0. *Stamina* numerosa. *Cariopsides* numerosæ monospermæ ecandatæ.

Herbæ *perennes.* Radices (caulesve *subterranei?*) *nunc Cyclaminis modo tuberosæ, nunc trunco subterraneo horizontali subrepentes, nunc merè fibrosæ;* folia radicalia *petiolata, simplicia, plus minùsve lobata aut secta;* caulis (scapusve) *foliis veris destitutus, apice gerens involucrum è foliis* 3 *(rarius* 2*) variè incisis constans: ex involucro nunc pedicelli uniflori aphylli solitarii aut plurimi, nunc in speciebus caulescentibus pedicellus unicus aphyllus, et alter seu ramulus involucrum bifolium pedicellumque uniflorum gerens.* Flores *valde variabiles facillimè pleni.* DC. syst. nat. 1. p. 188.

Sect. IV. ANEMONANTHEA. *Carpella* ovoidea stylo uncinata hirsutissima villosa aut subglabra. *Pedicelli* in involucro solitarii aut rarissimè bini umbellati, semper 1-flori nudi; sepala 5-15.

§. I. *Involucri foliis sessilibus; radicis trunco ovoideo tuberoso.*

A. *stellata,* foliis tripartitis; lobis cuneatis inciso-dentatis, involucralibus sessilibus oblongis integris subincisisve, sepalis 10-12 oblongis obtusiusculis. *DC. syst. nat.* 1. *p.* 198. *Prodr.* 1. *p.* 18.

Anemone stellata. *Lam. dict.* 1. *p.* 166. *Brot. fl. lus.* 2. *p.* 363. *DC. fl. fr.* 5. *p.* 634. *Savi bot. etr.* 2. *p.* 122. *Link enum.* 2. *p.* 89. *Swt. hort. brit. p.* 3. *n.* 4.

Anemone hortensis. *Lin sp.* 761. *Willden. sp. pl.* 2. *p.* 1277. *Pers. syn.* 2. *p.* 97. *Curtis magaz.* 123.

α. *versicolor.* Curt. magaz. l. c. Anemone versicolor. *Salisb. prodr.* 371.

β. *purpurea.* Supra.

Root tuberous. *Leaves* very variable, 3-parted, strongly nerved underneath: segments on the lower ones very broad and flat, wedge-shaped, and toothed with sharp pointed teeth, the middle one 3-lobed, side ones deeply cleft, also slightly lobed: *middle leaves* more deeply divided, the middle segment deeply 3-cleft, and the divisions also deeply parted with sharp spreading points, side ones doubly 2-cleft with acute spreading points: *upper leaves* still more deeply divided and the segments narrower, sharper and more spreading, also deeply channelled from the sides folding inwards. *Petioles* densely pubescent, more or less flattened on the upper side and rounded on the lower, those on the lower leaves the flattest. *Scape* densely pubescent, from 6 inches to a foot in height, 1-flowered. *Involucre* 3 or 4-leaved: leaflets sessile, oblongly lanceolate, acute, strongly and numerously nerved underneath, pubescent, one of them 3-forked, the others entire. *Pedicle* densely pubescent, from 3 to 5 inches long. *Sepals* 11, in our specimens, petal-like, of a bright purple, with darker veins, densely pubescent at the back, oblong, obtuse. *Stamens* numerous, surrounding the carpella: *filaments* slender, of a dark blue, the outer ones shortest: *anthers* pale blue: *pollen* blue, granular. *Carpella* flat, rough. *Style* of a blue purple, villous at the base, and smooth upwards.

Our drawing of this fine variety of A. *stellata* was taken from plants in the garden of Mr. Thomas Milne, at Parson's Green, Fulham, where we observed them in fine bloom in March last; he had lately received them from Scotland. It is a very desirable plant for the flower garden, as it produces its handsome flowers so early in Spring, at the season that they are most desired. It succeeds well in the open borders in the common garden soil, and is increased by dividing the roots after flowering.

1. Two of the Sepals. 2. Stamens. 3. The head of young seeds, each terminated by a small bluish purple Style. 4. One of the Seeds detached.

PÆONIA villosa.

Villous Pæony.

Natural Order. RANUNCULACEÆ. *DC. syst.* 1. *p.* 147.
Tribus V.? *PÆONIACEÆ.* Antheræ introrsæ; an ordo proprius. *DC. prodr.* 1. *p.* 64.
PÆONIA. Supra, fol. 19.
Sect. II. *PÆON.* Caulis herbaceus. Discus vix aut non expansus et carpella imâ basi tantùm circumdantia.
** *Foliis subtus puberulis.*

P. *villosa,* herbacea, carpellis dense tomentosis erectis apice subincurvis, foliis glauco-albescentibus subtus villoso-pubescentibus: inferioribus subtriternatis; superioribus ternatis foliolis pinnatifidis: segmentis oblongo-lanceolatis elongatis apice subincurvis.
Pæonia villosa. *Swt. hort. brit. p.* 10. *n.* 19.

A hardy perennial. *Stems* several from the same root, from a foot to 18 inches in height, more or less flexuose, smooth, slightly angular, of a whitish colour, terminated by a solitary white flower. *Leaves* of a white glaucous colour, underneath densely clothed with a soft villous down, and short villous hairs: lower ones generally triternate: upper ones ternate, with pinnatifid leaflets: segments oblongly lanceolate, elongated, their points a little incurved, and tipped with a kind of brown gland. *Petioles* short and stout, channelled on the upper side, and rounded on the lower, densely villous. *Peduncle* short, bluntly 4-sided. *Sepals* 5, unequal; the 3 inner ones roundly obovate, concave, villous underneath, reticulately

veined: outer ones about one third the size, ovate, taper-pointed. *Petals* 8, ovate, and obovate, rounded, unequal in size, imbricate, more or less cupped, white. *Stamens* numerous, erect or slightly spreading, surrounding the carpella: *filaments* smooth, slender, scarcely as long as the carpella: *anthers* joined by their base to the filaments. *Carpella* 3 or 4, closely pressed to each other, their points curved inwards, thickly clothed with a dense white wool. *Stigmas* smaller than usual, crested, slightly incurved, more or less flesh-coloured.

Our drawing of this curious and well marked species, was taken from a plant at the Nursery of Messrs. Whitley, Brames, and Milne, at Fulham, who had procured it from France; we have not heard of it in any other collection, nor can we trace it to any described species; we have therefore published it as new, under the name by which they received it; it appears to flourish well with them in the open border of the nursery, in the common garden soil, where it produced several strong flowering stems, and will soon be capable of being divided; near it, and at the same time, was flowering in great beauty, that fine plant P. *lobata*, of which we published a figure last year.

1. Calyx, showing the 5 unequal sepals. 2. One of the Stamens, showing the insertion of the filament at the base of the anther. 3. The 4 Carpella close pressed to each other, terminated by small cristate Stigmas. 4. An outline of one of the lower leaves reduced to about half the size.

[illegible] [illegible] 1823 [illegible]

NARCISSUS tenuifolius.

Slender-leaved Narcissus.

Natural Order. AMARYLLIDEÆ. *Brown prodr.* 1. *p.* 296.
Sect. I. *Radix* bulbosa. *Flores* spathacei, umbellati, rarò solitarii.
NARCISSUS. Perianthium superum, petaloideum, infundibuliforme, limbo sexpartito. *Corona* faucis campanulata, integrâ aut divisâ. *Stamina* tubo inserta, intrà coronam, ipsâ breviora. *Stigma* trifidum. Spatha 1-*phylla, latere dehiscens,* 1 *aut multiflora.*
Sect. II. CORBULARIA. *Genitalia* sursum curvatim adscendentia. *Filamenta* inclusa æqualia, tria tubi ipso basi inserta: tria basi tubo adnata. *Antheræ* incumbentes versatiles, curvatæ. Herbæ *exiguæ,* foliis *fere filiformis canaliculatis:* (Perianthium *petaloideum,*) *laciniis diminutis angustis,* coronâ *maximâ turbinatâ brevioribus.* Haworth Supp. plant. succ. p. 120.

N. *tenuifolius,* corona profundè 6-lobata: lobulis fere hemisphæricis, stylo longe exserto, foliis lucidis ante anthesin erectis. *Haworth loc. cit. p.* 121. sub Corbularia tenuifolia.
Narcissus tenuifolius. *Salisb. prodr. p.* 222. *Haworth Linn. trans.* 5. *p.* 243. *Hort. sub. lond. p.* 66.
Corbularia tenuifolia. *Salisb. in Hort. trans. p.* 349.

Bulb rather small. *Leaves* several, spreading, slender, semicylindrical, upper side slightly furrowed, of a dark green, smooth and glossy, from 9 to 12 inches in length, and about a line broad. *Scape* smooth, slightly angular, 4 to 6 inches long, 1-flowered. *Spatha* membranaceous, of a light brown colour, wrinkled, split on one side, nearly half way down, ending in a sharpish point, enclosing the germen.

Perianthium funnel-form; tube green, channelled with 6 deep furrows, narrow at the base and widening upwards, or obpyramidal; segments 6, very short and narrow, acute, erect, or slightly curved inwards, of a pale yellow, shorter than the tube, and decurrent down it. *Crown* very large, bell-shaped, very rugged and plaited, 6-lobed, of a bright yellow, lobes regular, rounded. *Stamens* 6, inserted in the tube; *filaments* long and slender, but shorter than the crown, points ascending: *anthers* incumbent: *pollen* yellow. *Style* smooth, longer than the crown, and exserted beyond it. *Stigma* deeply and unequally 3-lobed: lobes spreading, fimbriate.

For the opportunity of giving a figure of this rare and beautiful plant, we are indebted to Mr. William Anderson, Curator of the Apothecaries' Garden at Chelsea, where our drawing was made the latter end of April last; this species is readily distinguished from N. *Bulbocodium* by its deeply 6-lobed crown and slender leaves; it also comes in bloom earlier than that species, and appears to be equally hardy, thriving well in the open border, in the common garden soil; we should recommend its being planted in a soil composed of light sandy loam, we think it would grow and bloom stronger by that means; the only method of increasing it, is by the offsets of its roots, or by seeds, which sometimes ripen.

1. Tube of the Perianthium laid open, showing the inner side, and its 6 decurrent segments. 2. The 6-lobed Crown laid open, showing the insertion of the 6 stamens at the base of the tube. 3. Stamen detached. 4. Germen, terminated by the Style and 3-lobed Stigma.

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CALOPOGON pulchellus.

Tuberous-rooted Calopogon.

Natural Order. ORCHIDEÆ. *Brown prodr.* 1. *p.* 309.
Sect. III. MONANDRÆ. *Anthera* terminalis, inserta, persistens. *Masse pollinis* v. pulvereæ v. e corpusculis angulatis: basi v. infra apicem affixæ. *Brown Hort. Kew. ed.* 2. *v.* 5. *p.* 201.
CALOPOGON. Labellum posticum, unguiculatum: lamina barbata. *Perianthii* foliola 5, distincta. *Columna* libera. *Pollen* angulatum.

C. *pulchellus*, foliis ensiformibus striato-venosis acutis.
Calopogon pulchellus. *Brown Hort. Kew. ed.* 2. *v.* 5. *p.* 204. *Nuttall gen. amer.* 2. *p.* 193.
Cymbidium pulchellum. *Willden. sp. pl.* 4. *p.* 105. *Pers. syn.* 2. *p.* 516. *Pursh. fl. amer.* 2. *p.* 592.
Limodorum tuberosum. *Curtis magaz.* 116.

Root small, a bulb-tuber, nearly sphærical. *Leaf* erect, inclosed in a tubular blunt sheath, ensiform, tapering at both ends, striped with several longitudinal small veins, of a pale green colour, upper side glossy. *Scape* erect, or a little flexuose, about 18 inches in height; cylindrical below the flowers, and flattened upwards, smooth or very slightly pubescent. *Racemè* 5 or 6-flowered. *Bractes* small, concave, acute, not half the length of the germen, which it supports at the base. *Flowers* varying in colour, lilac or purple. *Perianthium* of 5-leaflets, spreading: 3 *outer ones* largest, sharp-pointed, strongly nerved, upper ones oblique, curved backwards, slightly concave, chan-

nelled; front one rather narrower, boat-shaped: *inner ones* ligulate, blunt. *Labellum* unguiculate, pointing backwards, eared on each side at the base; lamina dilated, bearded inside with a dense tuft of pedicellated yellow glands. *Column* free, bent like a bow, narrow and naked at the base, near the point winged, and spreading. *Anther* attached to the point of the column, covered with a purple hood. *Pollen-masses* 2, each 2-lobed. *Pollen* angular. *Germen* glossy, furrowed.

Our drawing of this handsome plant, was taken in May last, at the Nursery of Mr. Colvill, who received several plants of it last autumn from North America, some of which flowered very strong this spring; they were planted in small pots of sandy peat, but we believe they would grow much more freely if planted out in a border of peat earth, in a situation where they would not be likely to rot by too much moisture in winter. Mr. Nuttall mentions a plant growing in Carolina, which he supposes to be a second species of this genus, but that, we believe, has not as yet been introduced. Many curious plants of this interesting family are now introduced to our collections, and the cultivation of them is much better understood than it has hitherto been; the tropical species are now becoming very abundant and interesting in several collections, and are grown with as little trouble, as any common plants. In the new edition of our Botanical Cultivator, now in the press, a full account of their treatment will be given.

1. The 3 outer leaflets of the Perianthium. 2. The 2 inner ditto. 3. Labellum, showing its fringed crest. 4. Column, showing the anther covered with a hood. 5. The Hood divested of the anther. 6. The 2 Pollen masses.

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ADENOPHORA denticulata.

Toothed Adenophora.

Natural Order. CAMPANULACEÆ. *Brown prodr.* 1. *p.* 559.
ADENOPHORA. Supra, fol. 104.

A. *denticulata,* caule stricto, foliis subovatis grosse serratis, paniculâ subracemosâ, segmentis calycinis ovatis acuminatis argute denticulatis, stylo incluso. *Fisch. Adumb. gen. adenoph. p.* 5.

Adenophora denticulata. *Fisch. Ind. pl. p.* 1824. *hort. imp. pet. p.* 2.

Campanula tricuspidata. *Rœm. et Schult. syst.* 5. *p.* 158. *n.* 230. *sp. dubiæ.*

Perennial. Stems erect, from 1 to 2 feet high, slightly angular, smooth and glossy. *Leaves* very variable: *root ones* very large, cordate, petiolate, unequally toothed, some of the teeth very large, with smaller ones between them, scarcely pubescent: *petioles* deeply channelled on the upper side, and rounded on the lower, purple at the base: *stem leaves* ovate or ovately lanceolate, acute, very sharply serrate, slightly pubescent, lower ones with short footstalks, or attenuated at the base, upper ones sessile. *Flowers* paniculate, more or less branched, racemes 3 or more flowered, with small sharp bractes at the base of each footstalk. *Pedicles* short and slender, nodding. *Germen* below the calyx, smooth. *Calyx* deeply 5-parted, segments spreading, ovate or broadly lanceolate, taper-pointed, with 2 or 3 sharp teeth on each side. *Corolla*

campanulate, of a dark blue, 5-lobed, lobes erect, or slightly spreading. *Stamens* 5, *filaments* flat and dilated at the base, connected and fringed with short glandular hairs, the upper part slender and elongated. *Style* about the length of the corolla, surrounded at the base by a membranaceous crown, which in this species is very conspicuous. *Stigma* 3-lobed, at first erect, afterwards spreading.

We have now the pleasure of publishing another beautiful species of this genus, which was raised by Mr. William Anderson, at the Apothecaries' Company's Garden, from seed given him by Dr. Fischer, where it was fine in bloom in May last; it appears to be quite hardy, and grows freely in the common garden soil; the only chance of its being hurt is by spring frost, as it begins to grow early; it should be planted in a dryish situation, as its roots are succulent, and would be apt to suffer from too much moisture; young cuttings of it, planted under a hand-glass, would strike root, if the glass had a little air given it, to keep them from damping; but the best method of increasing it is from seeds, which will be produced in abundance, if a little pains be taken to fertilize the stigmas when in bloom.

1. Calyx spread open, showing its sharp toothed sides, divested of the corolla and stamens, to show the tubular crown that surrounds the style, and terminated by the style and 3 spreading stigmas. 2. The 5 Stamens widened and connected at the base with slender spreading points surrounding the style. 3. Stamen detached.

E D Smith del Pub by R Sweet Chelsea Augt 1 1825 A Bailey sculp

CYCLAMEN repandum.

Angular-leaved Cyclamen.

Natural Order. PRIMULACEÆ. *Brown prodr. 427.*
CYCLAMEN. Supra, fol. 9.

C. *repandum*, foliis cordatis repandis minute denticulatis, petiolis pedunculisque tuberculato-pubescentibus, laciniis corollæ oblongis obtusis.
Cyclamen repandum. *Sibthorp fl. græc. t.* 186. *Smith prodr. fl. græc.* 1. *p.* 128. *n.* 445. *Rœm. et Schult. syst.* 4. *p.* 131. *Link enum.* 1. *p.* 159. *Spreng. syst. veg.* 1. *p.* 572.
Cyclamen hederæfolium. *Bot. mag.* 1001?

Root tuberous, not so large as many others of the genus. ***Leaves*** cordate, widely expanded at the base, unequally angular, terminated with a short white bluntish mucro, more or less denticulate or toothed with very small white teeth; upper side pale green, variegated with white; underneath of a bright reddish purple, strongly nerved, the nerves branching. ***Petioles*** furrowed on the upper side and rounded on the lower, clothed with minute tubercles and brown pubescence. ***Peduncles*** about the length of the petioles, cylindrical, gradually tapering upwards, also covered with minute brown tubercles, and more densely pubescent than the petioles. ***Flowers*** nodding, of a bright pink with lighter points. ***Calyx*** campanulate, deeply 5-cleft, the segments ovate, acute, variegated with purple veins. ***Corolla*** with a globular inflated tube; segments oblong, blunt or rounded at the points, reflexed backwards so as to hide the calyx. ***Stamens*** 5, inserted in the base of the tube, and included within the mouth: ***filaments*** very short, scarcely observable; ***anthers*** cordate or inclining to sagittate at the base, the points acute and connivent. ***Style*** smooth, gradually tapering upwards, nearly double the length of

the stamens, exserted beyond the mouth of the corolla. *Stigma* a small brownish purple head.

This very desirable Spring flowering plant, a native of Greece, is at present very scarce in our collections, although well deserving a place in them all, both from the beauty and delightful fragrance of its flowers; and we expect before long to see it more plentiful than at present, as it appears to ripen its seeds freely, and the young plants, if well managed, will flower the second year from seeds. The present species, as well as several others, appear to be but little understood, and very much confused in the collections of this country, this being sold as C. *hederæfolium*, and also as C. *europæum*; but it is very different from the C. *europæum* of Jacquin, which has round, not angular leaves, and the segments of the corolla are lanceolate and acute: we do not know that it is at present in any collection of this country, but we expect a great many roots of it shortly from Switzerland. From the common British C. *hederæfolium* the present species is very distinct, but we believe that C. *neapolitanum* will prove to be the same as the British species, but we have not yet had an opportunity of comparing them. Professor Sprengel considers C. *hederæfolium* and the C. *latifolium* of the Flora Græca, as the same plant, but they are certainly very different; though we believe that most authors intend different plants by their *hederæfolium*, and some include more than one; the Hortus Kewensis, for instance, quoting C. *europæum* of English Botany, and C. *hederæfolium* of Botanical Magazine, for the same species, which are certainly very different.

Our drawing of the present subject was taken at the Nursery of Mr. Colvill; it succeeds well in small pots, in an equal mixture of turfy loam, peat, and sand, or it may be grown in a warm border, by the side of a wall, or in a southern aspect, where it will require a light sandy soil. Seeds of it should be sown in pots as soon as ripe; they will then vegetate freely.

1. Calyx. 2. Corolla spread open, to show the insertion of the 5 Stamens. 3. One of the Segments detached, with the Anther inserted in the base. 4. Germen terminated by the Style and very small capitate Stigma.

IRIS hæmatophylla.

Red-leaved Iris.

Natural Order. IRIDEÆ. *Brown prodr.* 302.
IRIS. Supra, fol. 68.

I. *hæmatophylla,* imberbis, foliis linearibus laxis scapo multo longioribus, spathis duabus oppositis acutis, floribus pedicellatis, germine trigono. *Link enum.* 1. *p.* 60. *Schult. mant.* 1. *p.* 315.
Iris hæmatophylla. *Fischer Mss.*
Iris sibirica γ. sanguinea. *Botan. magaz.* 1604.
Iris sanguinea. *Rœm. et Schult. syst.* 1. *p.* 475. *Donn hort. cant. ed.* 6. *p.* 17. *Hornem. hort. hafn.* 1. *p.* 58.

A tufted perennial. *Leaves* longer than the scape, weak, lax, linear, acute, slightly twisted, striate, when young more or less of a blood red or dark purple colour, becoming at length pale yellowish green, and only purple at the base. *Scape* long, striate, a little flattened, 2 or 3-flowered. *Sheaths* 2, opposite, acute, keeled, enclosing the base of the peduncles. *Peduncles* obsoletely 3-sided. *Germen* obtusely 3-sided, sulcate, rugged. *Perianthium* 6-parted, tube very short, scarcely any: *outer laciniæ* largest, reflexed, obovate, narrowed at the base, in some flowers pale blue, variegated with purple and yellow net-work from about the middle: in others darker blue, also variegated with white, yellow, and purple; *inner laciniæ* erect at first, incurved, narrower, acute, rather darker, and slightly variegated at the base. *Stamens* 3, inserted in the base of the laciniæ. *Style* short. *Stigmas* 3, petal-like, purple, bifid at the point, and a little jagged by the sides.

This handsome species is generally known in collections by the name of *Iris sanguinea*, a name, as Dr. Fischer observes, only tending to mislead, as from the name we might expect to see a red flower, instead of red leaves. The Doctor has, therefore, substituted *hæmatophylla* instead, which is much more appropriate: the name has been adopted by Link in the Enumeratio, and by Schultes in his Mantissa; although the above authors seem not to be aware that it is the same as I. *sanguinea*, which had been previously published by Hornemann, and also by Rœmer and Schultes in their Systema Vegetabilium. Professor Sprengel, in his Systema Vegetabilium, has included this as well as several others, which we should consider as distinct species, under I. *sibirica:* this, in particular, we have not the least hesitation in considering decidedly distinct; its time of flowering is full a month earlier than that species; and if the Spring should happen to be colder than usual, the flowers are often much injured, if not entirely destroyed, as it begins to grow so very early, and the flowers show themselves, before the leaves are grown of sufficient length to render them any protection, so that it is sometimes advisable to place a hand-glass over it to protect its bloom. Our plants bloomed this year the beginning of April. The leaves, when young, have always a red tinge; in some plants they are quite red or purple; but the colour both of the leaves and flowers varies considerably on different plants. It is a native of Siberia; and we would advise its being planted in as elevated and exposed situation as possible, to keep it from growing as late as possible in Spring, as by that means it would be more likely to flower well; it grows very freely in the common garden soil, in a dry situation, and may be increased by seeds, or by dividing at the root.

Drawn at the Nursery of Mr. Colvill, in April last.

1. The 3 Stamens exposed to view by being divested of the segments of the perianthium. 2. Front view of the Stigmas, 2 of them being cut off a little above the base. 3. Inner view of one of ditto.

PETUNIA nyctaginiflora.

Large-flowered Petunia.

Natural Order. SOLANEÆ. *Brown prodr.* 443.
Sect. I. *Pericarpium capsulare.*
PETUNIA. Calyx profunde quinquefidus, laciniis oblongis subspathulatis. *Corolla* tubulosa, limbo dilatato subquinquelobo inæquali. *Stamina* inæqualia non exserta, antheris subrotundis. *Stigma* capitatum subbilobum. *Capsula* calycis basi infra cincta, apice bivalvis, bilocularis, polysperma, seminibus minutis. Herbæ; *folia alterna, floralia ex eodem puncto gemini; flores solitarii, axillares. Affinis Nicotianæ quæ* Petun *Brasiliensium.* Jussieu Ann. du Mus. II. p. 215.

P. *nyctaginiflora,* caule viscoso hirto, foliis inferioribus alternis ovato-oblongis obtusis pubescentibus basi in petiolum attenuatis: floralibus subsessilibus cordato-ovatis oppositis, floribus axillaribus pedunculatis, corollis magnis calyce quadruplo longioribus.
Petunia nyctaginiflora. *Juss. ann. mus.* 2. *p.* 216. *t.* 47. *f.* 2. *Rœm. et Schult syst.* 4. *p.* 324. *Pers. syn.* 1. *p.* 218. *Poir. encyc. bot. supp.* 4. *p.* 375. *Botan. magaz.* 2552. *Spreng. syst. veg.* 1. *p.* 617.
Nicotiana axillaris. *Lam. illus. n.* 2287.
Nicotiana nyctaginiflora. *Lehm. hist. nicot. p.* 20.

Perennial. Herbaceous. Stems many from the same root, from a foot and a half to two and a half feet in height, nearly erect, more or less viscous, and thickly clothed with short unequal hairs, upper part alternately branched. *Leaves* quite entire, obtuse, pubescent, strongly nerved: *lower ones* oblong-ovate, villous, attenuated down the petiole: *stem ones* alternate, oval, rather succulent, pubescent, slightly fringed, attenuated at the base, and decurrent down the footstalk: *upper leaves* opposite, cordately-ovate, sessile or nearly so, hairy and ciliate. *Peduncles* axillary,

or between the two leaves nearly cylindrical, bent forward, thickly clothed with unequal, spreading, white hairs, and a viscous clamminess, as is the calyx and tube of the corolla. *Calyx* deeply 5-cleft; segments unequal, spathulate, distantly spreading, very hairy and fringed, their points recurved: the 2 upper ones largest. *Flowers* large, sweet scented. *Corolla* funnel-form: tube an inch and a half long, bluntly quadrangular at the base and inflated upwards, numerous green veins running down it from the limb; limb flat, spreading, nearly 2 inches across, deeply 5-lobed, white, with a green line from the point of each lobe; yellowish, and beautifully netted with black or dark purple in the throat: lobes broad, truncate or slightly rounded. *Stamens* 5, inserted above half way up the tube and decurrent down it, included within the mouth: *filaments* smooth, bent near their insertion: *anthers* incumbent, 2-celled, slightly sagittate at the base: *pollen* pale yellow. *Germen* conical, smooth and glossy. *Style* smooth, about the length of the stamens. *Stigma* capitate, slightly 2-lobed.

This fine flowering and delightfully fragrant plant is a native of South America, from which delightful country we are continually receiving valuable acquisitions, for adorning our gardens. The present subject is related to the Tobacco, and it may be sown in the borders as an annual, where it will produce its flowers, the latter part of Summer and Autumn; it strikes readily from cuttings; and if the plants are taken up in Autumn and potted, they will remain perennial, if placed in the greenhouse or in a frame, so as to protect them from frost, and then to turn them into the borders in Spring; they will continue to bloom all the Summer, and will ripen their seeds; or they may be grown in pots, as they can then be removed into the house, or where they are wanted. Our drawing was taken from a plant that was raised from a cutting given us by H. B. Ker, Esq.

1. Calyx, showing its unequal spathulate segments. 2. Tube of the Corolla spread open, showing the insertion of the 5 Stamens. 3. Stamen detached. 4. Germen, terminated by the Style and 2 lobed capitate Stigma.

E. Dalton Smith del.

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A. Bailey sculp.

CHELONE digitalis.

Fox-glove-flowered Chelone.

Natural Order. SCROPHULARINÆ. *Kunth synops.* 2. *p.* 110.
Sect. II. Stamina 4 antherifera.

CHELONE. Calyx quinquepartitus, subæqualis. *Corolla* basi tubulosa; fauce inflata; limbo bilabiato; labio superiore emarginato-bilobo; inferiore trifido. *Stamina* quatuor, didynama, exserta; filamentum quintum sterile. *Antheræ* loculis divergentibus. *Stigma* obtusum. *Capsula* bilocularis, septicido-bivalvis; placenta centrali demum libera.—Herbæ *oppositifoliæ.* Pedunculi *axillares et terminales, pauciflori, bracteati, per racemos vel paniculas dispositi.* Corollæ *coccineæ, purpurascentes, violaceæ,* (*cæruleæ, albæ aut variegatæ.*) Kunth synops. 2. p. 122.

Sect. II. PENTSTEMON. *Filamento sterili superne barbato.*

C. *digitalis,* caule erecto subpubescente, foliis radicalibus oblongo-lanceolatis basi in petiolum attenuatis undulatis tenuissime denticulatis glabris subtus alternatim nervosis pallidis: caulinis sessilibus cordato-ovatis acuminatis, floribus paniculato-ramosis, corollis leviter barbatis, stamine sterili superne ad medium barbatæ.

Pentstemon digitalis. *Nuttall.*

A fine herbaceous perennial. *Stem* erect, from 18 inches to 2 feet in height, slightly clothed with short hairs, which are generally tipped with a gland. *Leaves* smooth and glossy, more or less toothed with very small gland-like horny teeth, dotted or perforated with numerous small dots or punctures, of a bright glossy green on the upper side, and paler underneath: *lower leaves* oblongly lanceolate, acute, the point tipped with a brown gland, more or less undulate, attenuated at the base down the petiole, strongly nerved underneath, the nerves alternating with each other, midrib very large and prominent, channelled on the upper side: *petioles* purple at the base, channelled on the upper side and rounded on the lower, with a winged cartilaginous margin, quite smooth and glossy: *stem-*

leaves opposite, sessile, clasping the stem, broad at the base, cordately ovate, tapering to a slender point, much veined, the veins branching, but scarcely conspicuous. *Flowers* paniculately branching: *Panicles* leafy, more or less clothed with glandular hairs, the upper leaves and bractes lanceolate, taper-pointed. *Peduncles* upright, stiff, thickly clothed with hairs, which are all tipped with a brown gland. *Calyx* 5-parted nearly to the base, segments nearly equal, broadly lanceolate, acute, spreading, also clothed with glandular hairs. *Corolla* tubular at the base, inflated and campanulate towards the mouth, slightly bearded inside, and thickly clothed with glandular hairs on the outside, white tinged with blush, 2-lipped, gaping, upper lip 2-lobed, lower one 3-lobed; lobes ovate, bluntish. *Stamens* 5; 4 producing anthers: *filaments* smooth, inserted in the middle of the corolla, and decurrent down the tube, twisting round each other at the points, 2 longer than the others: *anthers* 2-celled, the cells diverging, bearded at the back: *sterile filament* rather longer than the others, flat, broadest at the point, from which it is bearded with long spreading white hairs about half-way down, the hairs a little reflexed. *Germen* pyramidal, smooth and glossy. *Style* smooth, about the length of the stamens, the point bent forwards, and terminated by a small blunt *Stigma*.

This fine herbaceous plant is one of those found by Mr. Nuttall in the Arkansa territory of North America, and has been lately introduced to our collections; the plant from which our drawing was taken, was received last autumn from New York, by Mr. Anderson, of the Apothecaries' Garden at Chelsea, to whom it was sent by Mr. Hogg; it thrives well in the common garden soil; and cuttings, planted under hand-glasses, strike root readily. We have only adopted Pentstemon as a Section, as has been done by Kunth, in his Synopsis, the character by which Chelone and Pentstemon were distinguished, not being sufficient, in our opinion, to keep them apart as genera.

1. Calyx. 2. Corolla spread open, to show the insertion of the stamens, four of them fertile, and one hairy barren one, which produces no anther. 3. Germen, terminated by the Style and simple Stigma.

LITHOSPERMUM davuricum.

Daurian Gromwell.

Natural Order. BORAGINEÆ. *Brown prodr.* 1. *p.* 492.
Tribus II. *Nuces* quatuor, uniloculares.
B. Nuces *distinctæ, fundo calycis affixæ.*—a. *Faux corollæ pervia.*
LITHOSPERMUM. Calyx 5-partitus. *Corolla* infundibuliformis. *Antheræ* inclusæ. *Nuces* basi imperforatæ ovatæ. *Spreng. syst. veg.* 1. *p.* 502.

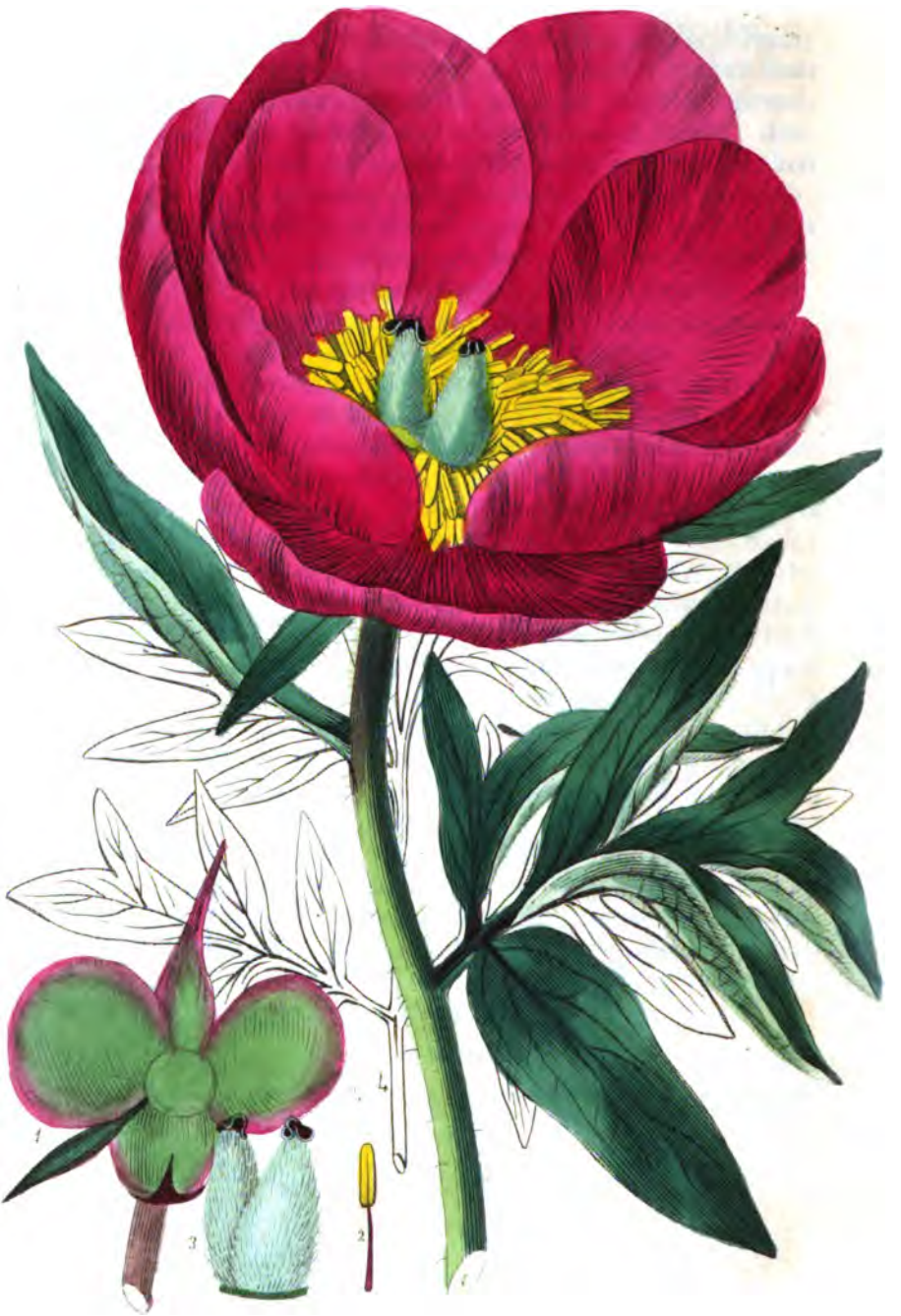
L. *davuricum*, foliis obsolete nervosis scabriusculis: radicalibus ovatis obtusis: caulinis lanceolatis acuminatis, racemis laxis subpaniculatis, calycibus obtusiusculis subvillosis.
Lithospermum davuricum. *Lehm. asperif. II. p.* 296. *Link. enum.* 1. *p.* 168. *Spreng. syst. veg.* 1. *p.* 546.
Pulmonaria davurica. *Bot. mag. t.* 1743. *Rœm. et Schult.* 4. *p.* 55. *Hort. sub. lond. p.* 30.

Root perennial, somewhat creeping. *Stems* erect, from 6 inches to a foot in height, paniculately branched, angular and furrowed, rough, and clothed with decumbent white hairs. *Leaves* roughish, slightly glaucous, also clothed with small decumbent hairs: *root ones* petiolate, ovate, bluntish, strongly nerved underneath; those on the stalk sessile, lanceolate, taper-pointed, points generally reflexed or revolute, sometimes twisted, and the margins on the upper ones more or less rolled back. *Flowers* in panicles, of a bright azure blue when expanded, before expansion of a flesh colour or light purple; *racemes* lengthening out, often forked, cernuous. *Pedicles* short, densely clothed with close-pressed white hairs, as is the calyx. *Calyx* deeply 5-cleft: segments short, lanceolate, keeled at the back,

fringed. *Corolla* funnel-form, nodding, tube bluntly 4-sided, smooth and glossy, 4 or 5 times longer than the calyx; limb cup shaped, erect or slightly spreading, shallowly 5-cleft; segments rounded, erose. *Stamens* 5, inserted in the mouth, with a blunt, naked yellow scale between each, included within the limb; *filaments* smooth, widened and bent backward just below the anthers, which are incumbent or attached by their back to the filaments, erect. *Style* smooth, slender, longer than the corolla. *Stigma* small, capitate.

Our drawing of this handsome species was taken from a fine strong plant growing in the open ground, at the Nursery of Mr. Lee, at Hammersmith, in June last; we have placed it in the genus Lithospermum rather than Pulmonaria, as has been done by Lehman, Link, and also Professor Sprengel in his Systema Vegetabilium; the same situation is also adopted for *Pulmonaria maritima* by Sir James Edward Smith; they certainly agree better with Lithospermum than Pulmonaria; but we think the whole section to which they belong would have been much better kept apart as a distinct genus, as had been already done by Roth under the name of Mertensia; and we have no doubt but it will be so constructed at some future period, when a greater number of the species shall have been examined in a living state: all those species with the short calyx hitherto referred to Pulmonaria, must now be transferred to Lithospermum; the greater part of them are very ornamental herbaceous plants, and thrive well in the open borders of the flower-garden, but like a rich light soil to grow in; they are increased by parting the roots, or by seeds.

1. Calyx. 2. Corolla spread open, to show the insertion of the 5 stamens, and the small scale between each. 3. Stamen detached, showing its widened filament. 4. Style and small capitate Stigma.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PÆONIA Russi.

Crimson Pæony.

Natural Order. RANUNCULACEÆ. *DC. syst. nat.* 1. *p.* 127.

Tribus V.? *PÆONIACEÆ.* Antheræ introrsæ; an ordo proprius. *DC. prodr.* 1. *p.* 64.

PÆONIA. Supra, fol. 19.

Sect. II. *PÆON.* Caulis herbaceus. Discus vix aut non expansus et carpella imâ basi tantùm circumdantia.

P. *Russi,* herbacea, carpellis pilosis recurvatis, foliorum segmentis ellipticis integris subtùs vix pubentibus. *DC. prodr.* 1. *p.* 66.

Pæonia Russi. *Biv. man. sic.* 4. *p.* 12. *Swt. hort. brit. p.* 10. *Spreng. syst. veg.* 2. *p.* 615.

Stems several from the same root, erect or a little flexuose, from 18 inches to 2 feet in height, obtusely angular, and furrowed with several longitudinal channels down the stem, smooth or slightly pubescent, of a dull yellowish green. *Leaves* petiolate, ternate; *leaflets* petiolate, pinnatifid, pubescent underneath; segments elliptic, acute, tapering at both ends, generally entire, whitish underneath, and of a pale green on the upper side, strongly nerved underneath, the nerves much branched: *upper leaves* rather narrower and less divided. *Petioles* stout, lower ones much longer than the upper ones, channelled on the upper side, and rounded on the lower, furrowed by the sides, widened and thickened at the base. *Flower* terminal, solitary, of a bright crimson. *Peduncle* slightly angular, thickened upwards. *Bractes* 2, one close to the calyx, the

other a little below it, lanceolate, taper-pointed. *Sepals* 5, unequal; the 3 inner ones 4 times the size of the outer ones, nearly round, concave, strongly and numerously nerved underneath, with purple membranaceous margins; outer ones small and acute. *Petals* 8, much imbricate, varying in shape and size, oblong, oval or obovate, slightly crumpled, and striated with innumerable slender lines, that are more or less branched, margins undulate. *Stamens* numerous, about the length of the germen, which they surround, more or less spreading. *Filaments* smooth, bright purple, inserted in the base of the anther, which is 2-celled, and bursts by the sides to discharge the pollen; *anther* nearly as long as the filament: *pollen* bright yellow, powdery. *Carpella* 2 or 3, densely clothed with white crowded hairs, their points recurved. *Stigmas* crested, bent backwards, also hairy.

Our drawing of this handsome Pæony was taken at the Nursery of Mr. Colvill, in June last, where it was in flower for several days; we think there can be no doubt of its being the P. *Russi* of M. Decandolle, as it agrees in every particular with his definition of that species. This interesting and splendid flowering genus is now becoming very extensive, as its different species and varieties are in general request by cultivators of handsome plants; the greatest fault attached to the genus is, that the flowers do not last long in bloom; and if the roots are not become very large and strong, the flowering will be soon over; but this is the less to be regretted at this season of the year, when so many other fine plants are in bloom, and others coming on in succession.

The present plant succeeds best in an open situation in the flower border, and prefers a rich loamy soil; it may be increased by parting at the root, or by seeds, which ripen plentifully.

1. Calyx, showing the unequal sepals. 2. Stamen detached, to show the smooth purple filament, and the anther. 3. The hairy Carpella, terminated by the crested Stigmas. 4. Diminished outline of a lower leaf.

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DELPHINIUM pictum.

Painted-leaved Larkspur.

Natural Order. RANUNCULACEÆ. *DC. syst.* 1. *p.* 127.
Tribus IV. *HELLEBOREÆ.* Æstivatio calycis et corollæ imbricata. *Petala* nunc 0, nunc irregularia bilabiata nectarifera. *Calyx* petaloideus. *Carpella* capsularia dehiscentia polysperma.

DELPHINIUM. Calyx coloratus deciduus 5-sepalus, sepalo superiore basi in calcar cavum producto. *Petala* 4, interdùm inter se coalita, 2 superiora basi in appendices intra calcar contentas (calcar internum) producta. *Stamina* numerosa. *Ovaria* 1-5, sæpius 3. *Capsulæ* totidem distinctæ univalves folliculares. *Semina* numerosa arido-baccata. Herbæ *radice annuâ exili aut perenni subfasciculatâ donatæ;* caules *erecti ramosi;* folia *petiolata caulina palmatim multifida;* flores *racemosi, sæpiùs cærulei aut albi rosei et variantes purpurei,* in unicâ *specie flavi;* bracteæ 3 *ad singulum pedicellum,* 1 *sub basi* (bractea), 2 *secus pedicellum* (bracteolæ) *sæpiùs oppositæ, nunc ab basin ut in D. staphisagriâ, nunc in medio pedicelli ut in D. Requienii, nunc circà apicem ut in Delphinastris.* DC. syst. 1. p. 340.

Sect. IV. STAPHYSAGRIA. *Ovaria* 3-5. *Petala* libera glabra, 2 inferiora unguiculata limbo ovato; calcar breve, interiùs dipetalum; *Bracteolæ* oppositæ, à flore distantes, sæpiùs cum bracteâ ad basin pedicellæ sitæ; *Capsulæ* ovatæ ventricosæ; *Semina* subglobosa grossa; *Cotyledones* ovales maximæ; *Radices* biennes. *DC. l. c.*

D. *pictum,* calcare calyce vix breviore, bracteolis ad basin pedicelli insertis, petiolis pubescentibus, pedicellis flore vix longioribus. *DC. syst.* 1. *p.* 363. *Prodr.* 1. *p.* 56.
Delphinium pictum. *Willd. enum.* 2. *p.* 574. *Link. enum.* 2. *p.* 81. *Swt. hort. sub. lond. p.* 125. *Hort. brit. p.* 7. *n.* 36. *Spreng. syst. veg.* 2. *p.* 617.

Root biennial. *Stem* erect, 2 or 3 feet high, more or less branched, thickly clothed with unequal spreading villous hairs, and terminated with a compact raceme of flowers. *Leaves* flat, variable, on long footstalks: *lower ones* smooth, deeply 7-lobed, beautifully variegated with their white branching veins: lobes sharp-pointed, entire or 3-lobed, narrowed downwards: *middle leaves* deeply 5 or 7-parted, more or less pubescent, segments oblongly-lanceolate, spread-

ing, tapering at both ends, not so much nerved: *upper ones* deeply 3-cleft or entire, taper-pointed, green on the upper side and purplish underneath. *Petioles* densely clothed with spreading villous hairs, flattened on the upper side and rounded on the lower, sheathing at the base. *Raceme* compact, many-flowered, from 6 inches to a foot in length: *flowers* varying in colour on different plants, blue, white, or variegated. *Bractes* 3, linear, 2 at the base of and one on the pedicle. *Pedicles* unequal in length, the lower ones double the length of the upper ones, densely clothed with short villous hairs. *Calyx* of 5 sepals, which are oblong, bluntish, pubescent, much veined, spreading, 3 upper ones erect, the middle one ending at the base in a short, hollow, rugged spur, lower ones divaricately spreading; *spur* about half the length of the sepals. *Petals* 4, each 2 joined at the base, and producing 2 sharp spurs inside the other one: *upper ones* obliquely lanceolate, undulate; *lower ones* narrow at the base, and terminated in a broad, obliquely rounded, and curled limb. *Stamens* numerous: *filaments* winged at the base, the points naked and subulate, the wing terminated by several spreading hairs: *anthers* 2-lobed, fringed. *Germens* 3, villous, terminated by 3 short *Styles* and bluntish simple *Stigmas*.

A fine stately biennial plant, whose elegantly veined leaves make a handsome appearance, and its flowers are also very pretty, and last in bloom a considerable time; the time of flowering depends a great deal on the season that the seeds were sown, and also on the situation in which they are grown: those should be sown as soon as ripened, and they will bloom the following summer; whereas if they are left till spring, many of them will not flower till the following spring; a rich light soil suits them best; and if the winter is very severe, a little covering will be requisite.

Drawn at the Nursery of Mr. Colvill, in June last.

1. The 5 Sepals spread open. 2. The 4 Petals with the 2 spurs at the base of the upper ones, and showing the Stamens in front. 3. The 2 upper Petals detached with the spurs at their base. 4. The 2 lower ones showing their broad points. 5. Stamens detached. 6. Single ones detached, showing the winged base terminated by hairs. 7. Pedicle terminated by the 3 carpella, and showing the bractes, one at the base, the other on the pedicles.

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POTENTILLA atrosanguinea.

Dark Crimson Cinquefoil.

Natural Order. Rosaceæ. *Juss. gen.* 334.

Tribus II. Potentillæ. *Calyx* explanatus, persistens. *Ovaria* 2, vel plura, sæpius indefinita, libera, unilocularia; ovulum 1, appensum, adscendens vel suberectum. *Akenia* receptaculo exsucco vel carnoso imposita, exsucca vel drupacea. *Radicula* supera vel infera. Herbæ *rarius* frutices. *Kunth. synops. v.* 3. *p.* 464.

POTENTILLA. Calyx fundo concavo; limbo explanato, quinquepartito, patente, externe quinquebracteato. *Petala* 5, calyci inserta. *Stamina* circiter 20, ibidem inserta. *Ovaria* crebra, receptaculo convexo imposita, sessilia, unilocularia; *ovulum* 1, infra apicem suspensum. *Styli* laterales. *Akenia* exsucca, receptaculo exsucco imposita. *Semen* infra apicem suspensum, pendulum. *Radicula* supera. Herbæ, *rarius* frutices. Folia *alterna, impari-pinnata, pinnatifida, digitata aut ternata.* Stipulæ 2, *petiolo adnatæ.* Pedunculi *axillares et terminales, uni-aut multiflori, plerumque per corymbos dispositi.* Corollæ *flavæ vel croceæ, rarius albæ vel rubræ.* Kunth loc. cit.

P. *atrosanguinea*, sericeo-villosa, foliis ternatis petiolatis; foliolis obovatis inciso-serratis subtùs niveo-tomentosis, segmentis calycinis bracteolisque ellipticis acutis, petalis obcordatis, caule simplici assurgente. *Don prodr. fl. nepal. p.* 232. Potentilla atrosanguinea. *Lodd. bot. cab.* 786.

Root perennial, herbaceous, branching round in all directions; *branches* simple, spreading, the points ascending, 3 or 4 times or more forked, thickly clothed with unequal spreading villous hairs, more or less of a purplish colour. *Leaves* ternate; lower ones with long petioles, stem ones nearly sessile: *leaflets* broadly ovate, obovate or wedge-shaped, oblique at the base, more or less plaited, slightly concave, deeply serrate, the teeth numerous, close to each other, imbricate at the base, the points terminated with a bunch of hairs; strongly and numerously nerved underneath, and channelled above, the upper side of a bright green, clothed with silky villous hairs, underneath densely clothed with white wool. *Petioles* flat and furrowed on the upper side and rounded on the lower, the upper side

purple, and green underneath, thickly clothed with villous hairs. *Stipules* on the lower leaves, oblongly lanceolate, taper-pointed, membranaceous, clothed with silky hairs, and joined to the base of the petioles; those on the upper leaves broader, ovately oblong, taper-pointed or acute, of a leafy texture, green above and white underneath, fringed. *Peduncles* villosely hairy, proceeding from the forks of the branches, at length terminated in a sort of cluster. *Bractes* 5, attached to the calyx, elliptic, acute, the margins a little revolute, reflexed a little when the flowers are expanded, increasing in size and spreading after flowering, green, plaited and hairy on the upper side, and clothed with a dense white tomentum underneath. *Calyx* deeply 5-parted, segments spreading, elliptically lanceolate, taper-pointed, outside brown, villosely hairy and fringed, inside concave, of a dark purple. *Stamens* 20, inserted in the base of the calyx, and surrounding the carpella; *filaments* unequal in length, smooth, purple. *Carpella* numerous, inserted in an obturbinate receptacle, smooth and glossy, each terminated by a *Style* and small blunt *Stigma*.

This grand flowering species of Potentilla is a native of Nepaul, and is of late introduction to this country; some other handsome species of the same genus are also introduced to our gardens, from the same interesting country, one of them, the P. *formosa* of Don. P. *nepalensis* of Hooker, is also a red flowered species, but much lighter than our present plant, the leaves are also quinate. The present plant thrives well in the open border, in a sheltered situation, where it has been in flower ever since May last, when our drawing was made, and it appears likely to continue in bloom for months to come; it also ripens seeds, which should be sown as soon as gathered, and they will soon be nice young plants.

Drawn at the Nursery of Mr. Colvill, King's Road.

1. Calyx, showing the 5 segments, and the 5 bractes surrounding it. 2. The 20 Stamens inserted in the base of the calyx, showing their unequal lengths. 3. The Carpella terminated by a slender Style, and small capitate Stigma. 4. One of the Carpella detached.

Smith del. Pub by R. Sweet Chels A. Bailey sculp.

WHITLEYA stramonifolia.

Stramonium-leaved Whitleya.

Natural Order. SOLANEÆ. *Brown prodr.* 443.

WHITLEYA. Calyx campanulatus, 10-costatus, apice rumpentibus. *Corolla* campanulata, 5-loba: lobis rotundatis reflexis. *Stamina* 5, incurva, basi corollæ inserta: *filamenta* pilosa, basi dilatata: *antheræ* bilobæ, sagittatæ, basi et apice poris dehiscentes. *Stigma* capitatum, bilobum. *Bacca* exsucca, subglobosa, 2-locularis, polysperma; placenta crassa favosa. *Semina* compressa, subreniformia. *News of Literature and Fashion, vol.* 3. *p.* 108.

W. *stramonifolia,* ramis dichotomis cylindricus tomentoso-canescentibus, foliis geminis ovatis acutis undulatis rugosis subtus tomentosis, floribus axillaribus solitariis cernuis. *News of Liter. l. c.*

A strong growing herbaceous perennial plant. *Stems* several from the same root, solid, erect, 3 to 5 feet high, branching: *branches* spreading, cylindrical, loosely clothed with a white mealy tomentum. *Leaves* in pairs, one double the size of the other, lower ones from 6 inches to a foot in length; upper ones smaller, ovate, acute, a little tapering towards the base, sides nearly equal, very much undulate, rugose, reticulately veined; upper side smooth, or very slightly pubescent, underneath clothed with a thick loose white tomentum, the nerves more or less ferruginous: margins entire. *Petioles* short and stout, slightly winged, longer than the peduncles. *Flowers* solitary, axillary or between the two leaves, nodding. *Peduncle* short, densely villous. *Calyx* campanulate, inflated, strongly 10-nerved, the mouth at first entire and even, but as the flower expands, it bursts irregularly into 2 to 5 segments: nerves and furrows thickly clothed with ferru-

ginous woolly hairs. *Corolla* campanulate, 5-angled, clothed with decumbent hairs, green tinged with brown, the limb 5-lobed; lobes broad and rounded, reflexed or revolute. *Stamens* 5, inserted in the base of the corolla, and connivent at the points: *filaments* hairy, dilated at the base, and tapering upwards: *anthers* 2-lobed, sagittate, open at the base and point to discharge the pollen. *Germen* smooth. *Style* smooth and glossy. *Stigma* capitate, emarginate: *Berry* dry, enclosed in the calyx, nearly globular, 2-celled, many seeded, the *seeds* flat, kidney-shaped or nearly so, inserted in the thick fleshy honeycombed placenta.

Our drawing of this curious plant was taken from strong specimens flowering in the open ground at the Nursery of Messrs. Whitley, Brames, and Milne, where it was first raised from seeds given them, with numerous other curious seeds from Nepaul, by Robert Henry Jenkinson, Esq.; it has succeeded well in the open borders these three last winters, so that no doubts can be entertained of its being hardy; it also perfects its seeds, so that it may soon become plentiful: on examination, it proves to be a very distinct genus, nearest related to ANISODUS of Link, in Sprengel's Systema Vegetabilium; we have named it in compliment to our respected friend, Mr. Reginald Whitley, who has, through his numerous correspondents, been the means of introducing a great number of new plants to this country; and we are somewhat surprised that his name has not been attached to a genus long before this.

As the present plant grows to a largish size, and also to a good height, being about 5 feet high, if grown in rich soil, it will require to be planted at some distance from any other plants, and will be most suitable for the back of the flower borders.

1. Calyx, showing its strong nerves and torn limb. 2. Corolla spread open, showing its 5-lobed limb, and the 5 stamens inserted at the base, showing their hairy filaments. 3. Germen, terminated by the Style and emarginate Stigma. 4. Front view of the 2-celled dry Berry. 5. Side view of the same, showing the large fleshy honeycombed Placenta in which the seeds are fixed. 6. Seed. 7. Anther detached, showing the opening at the top and bottom for the pollen to escape.

PASSIFLORA Colvillii.

Colvill's hybrid Passion-flower.

Natural Order. PASSIFLOREÆ. *Juss. ann. mus.* 6. 102.

PASSIFLORA. Calyx inferus, basi urceolatus, limbo 5-partito magno colorato, laciniis sub apice mucronatis, simul cum corolla marcescentibus. *Corolla* 5-petala, calyci inserta. *Corona* interior ex imo calycis limbo enata sub petalis, colorata multipartita laciniis numerosis filiformibus radiantibus v. erectis; duplex intùs altera corona conformis sed brevior et depressior urceolo inserta; intima sæpè circa stipitem centralem connivens. *Germen* stipiti erecto insidens; *styli* 3, clavati; *stigmata* 3, capitata. *Stamina* 5, summo inserta stipiti sub germine; *filamentis* basi brevitèr connatis, ultrà distinctis horizontalibus; *antheræ* oblongæ incumbentes. *Bacca* carnosa cortice interdùm solido, formâ et mole varia, lævis, rarò pilosa, 1-locularis polysperma *receptaculo* seminifero triplici parietibus affixo; *semina* numerosa compressa, arillata *arillo* membranaceo pulposo; *embryo* planus *albumine* carnoso tectus.—Herbæ *scandentes*, interdùm lignosæ; folia *alterna stipulacea, simplicia, integra v. lobata v. variùs partita*, petiolo *nudo v. utrinque glanduloso*; cirri *axillares*; pedunculi 1-3 *axillares* 1-*flori, infrà calycem plerumque articulati*, involucro *ad articulum sæpè triphyllo v. tripartito laciniis integris v. variùs dissectis, interdùm minimo v.* 1-*folio v. nullo.* Juss. gen. 397.

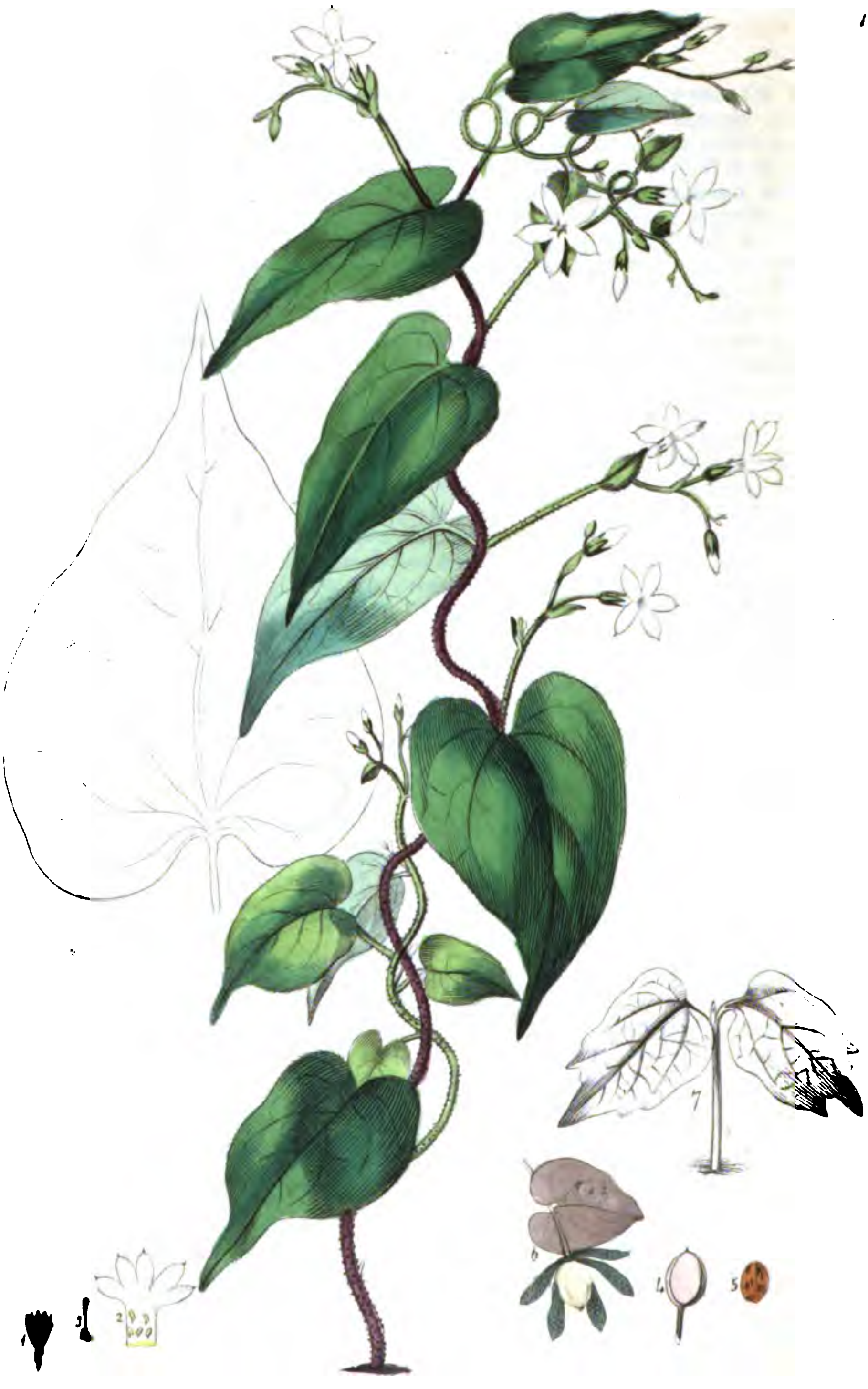
P. *Colvillii*, foliis tripartitis palmato-quinquepartitisve subtus reticulatis; segmentis oblongo-lanceolatis serrulatis in summo petiolo biglandulosis, stipulis sublunatis acuminatis serrato-ciliatis, involucro triphyllo: bracteis ovatis obtusis serrulatis, filis coronæ corolla parum brevioribus. *The News of Literature and Fashion, vol.*3. *p.*94.

Stem fruticose, nearly cylindrical or very slightly angular, climbing and supporting itself by tendrils, branching: *branches* spreading in various directions, slightly angular, smooth and somewhat glossy, thinly clothed with short hairs, of a whitish transparent green, or often tinged with purple. *Leaves* very variable, deeply 3-cleft or palmately 5-parted, of a bright green on the upper side, lighter and slightly pubescent underneath, reticulately veined, the larger veins generally more or less tinged with purple: *segments* spreading, flat or slightly undulate at the margins, oblongly or broadly lanceolate, not very acute, the margins serrulated with numerous small sharp teeth. *Petioles* shorter than the peduncles, slightly flattened on the upper side and convex on the lower; thickly clothed with short, soft, crooked, or incurved hairs, and producing 2 shortish top-shaped glands near the summit. *Stipules* lunate or

nearly so, terminated with a long sharp slender point, the lower margin entire, and the upper one deeply and sharply serrate. *Tendrils* axillary or alongside of the peduncle, the points curling and catching hold of the first support that comes within their reach. *Peduncle* axillary, solitary, thickening towards the summit, scarcely pubescent. *Involucre* of three bractes, which are roundly ovate, obtuse, and serrulate. *Flower* large, spreading flat, 3½ inches across. *Calyx* urceolate at the base, and divided into 5 spreading segments, which are oblongly lanceolate, white and petal-like on the upper side, green and sharply keeled on the lower, the keel terminated in a sharp muronated point, a little below the apex. *Corolla* of 5 petals, inserted in the calyx, and alternating with its segments: *petals* white, tinged with blush, and dotted with numerous small red brown spots, oblongly lanceolate, obtuse. *Crown* composed of 5 circles of rays, the 2 lowermost circles longest, nearly as long as the petals, rays spreading, filiform, cylindrical with bluntish points, variegated with purple, white, and blue; middle circle between spreading and erect, dark purple: 2 inner ones nearly erect, the inner one of the lightest purple, and shortest; inside of this is a handsome crown, which is spotted with small red specks, and glandularly crenulate. *Column* erect, cylindrical, spotted with faint red spots. *Stamens* 5; *filaments* monadelphous, the points distinct and flat, joined to the back of the anthers: *anthers* oblong, incumbent, 2-celled. *Germen* slightly hairy. *Styles* 3, purple, spreading, club-shaped. *Stigmas* capitate, with a notch on one side.—*News of Literature, l. c.*

As several of our Subscribers have expressed to us a wish, that we should, occasionally, introduce into our work some handsome or curious hardy shrubs, we intend, for the future, to do so, when any appear interesting, or uncommon; and we have availed ourselves of the present opportunity to introduce this handsome hybrid Passion-flower, which promises to be a very great acquisition to our gardens, as it will certainly be as hardy as the common P. *cærulea*, being raised at Mr. Colvill's Nursery, from a seed of the hardy P. *incarnata* that had been fertilized by the pollen of P. *cærulea*. We cannot agree with the present method adopted in naming hybrid plants, which would have occasioned the name of ours to have been P. *cæruleo-incarnata*, for we have no doubt but half the plants in tropical countries are of hybrid origin, and would require to be named in the same way; and when they become to be muled several times over, they would require a name a yard or two long; we shall, therefore, continue the plan we have already adopted. The present plant will grow freely in the common garden soil, and only requires to be covered with a mat or two in very severe frost, and a little dry litter put about its roots. Cuttings strike root freely under a hand-glass.

1. The 3-toothed Bractes. 2. Calyx. 3. The 5 circles of Rays. 4. Receptacle divested of the rays, to show the glandular crown at the base of the column, which is terminated by the 5 Stamens. 5. Front view of a detached Stamen. 6. Germen, terminated by the 3 Styles, and large capitate Stigmas.



E. D. Smith del.

Pub by J. Sweet Chelsea Oct 1 1825

J. Dalley sculp

DINETUS racemosus.

Cluster-flowered Dinetus.

Natural Order. CONVOLVULACEÆ. *Brown prodr.* 481. Sect. I. Ovarium unicum.

DINETUS. Calyx 5-partitus, persistens: laciniis corolla brevioribus, in fructu patentibus majoribus. *Corolla* infundibuliformis: limbo 5-partito, laciniis acutis. *Stylus* indivisus. *Stigma* capitatum, subbilobum. *Capsula* membranacea, monosperma. *Semina* rugosa. *Cotyledones* acutæ, tridentatæ.

D. *racemosus*, caule volubili verrucoso-pubescente, foliis cordatis acuminatis nervosis reticulatis utrinque pubescentibus, racemis paniculatis divaricatis axillaribus et terminalibus: ramis ramulisque dichotomis, calycibus subhirsutis tubo corollæ brevioribus.

Dinetus. *Hamilton in Herb. Lamb.*

Porana racemosa. *Roxburgh in Flor. Ind.* 2. *p.* 41. *Don prodr. fl. nepal. p.* 98. *Spreng. syst. veg.* 2. *p.* 614.

Annual. Stem climbing, more or less branched, very much warted, thickly clothed with short hairs, as are the leaves, petioles, and peduncles. *Leaves* entire, cordate, with long taper points, rounded at the base, hairy on both sides, of a light glossy green, strongly 3-nerved from the base, the nerves reticulately branched. *Petioles* shorter than the leaves, furrowed on the upper side, and rounded on the lower. *Racemes* axillary, and terminal, the terminal ones panicled, on long slender peduncles. *Bractes* persistent, varying in size, the lower one leaf-like, broadly cordate, acute, reticulate, pubescent, upper ones much smaller. *Pedicles* short, slightly nodding, densely pubescent. *Calyx* short, densely pubescent, 5-cleft, segments lanceolate, concave, scarcely acute. *Corolla* funnel-form, of a pure white; tube about half as long again as the calyx; limb 5-cleft, stellately spreading, segments about the length of the tube, oblongly obovate, concave, and terminated abruptly in a short acute point *Stamens* 5, inserted in the tube; *filaments* short and smooth.

Style smooth, shorter than the tube. *Stigma* capitate, slightly 2-lobed. *Capsule* about the size of a small pea, nearly globular, very thin and of a membranaceous texture, strongly veined with numerous green veins that are more or less branched, and containing a single large rugged seed, of a yellowish brown colour; this, when sown, vegetates in 3 or 4 days; the *Cotyledons* are very large, 3-lobed or 3-toothed, side lobes very short, middle one long and acute. *Bractes* and *Calyx* persistent, increasing in size as the seeds ripen; when ripe, the segments of the calyx are radiately spreading, roundly spathulate, strongly 3-nerved, and reticulately veined.

As the different genera belonging to Convolvulaceæ are chiefly characterised by their stigmas and capsule, we certainly could not retain the present plant in the genus PORANA, the original species of which are described with a campanulate corolla, a 2-cleft style, and a capsule of 2 cells, not one of which characters agree with our present subject; and we believe that P. *paniculata* of Roxburgh, and P. *grandiflora* of Wallich, in the Flora Indica, will prove to be congeners of our plant. We stated our opinion to Mr. David Don, who agrees with us that it should be kept distinct from Porana, and who pointed out to us that it had already received the name of DINETUS by Hamilton, under which name, as well as *Porana dichotoma*, it is preserved in Mr. Lambert's Herbarium; we therefore adopt his name. Mr. Lambert was also so kind as to show us very luxuriant specimens grown at Boyton, in Wiltshire, where it covered an arbour, and flowered profusely: it is a hardy annual, and may be sown in the open ground, in a warm situation, early in Spring.

Drawn at the Nursery of Mr. Colvill, where it was raised from seed given him by Mr. Hood, of South Lambeth, that had been received from Nepaul.

1. Calyx. 2. Corolla spread open, to show the insertion of the 5 Stamens. 3. The Germen and Style terminated by a capitate, slightly 2-lobed Stigma. 4. The dry membranaceous Capsule divested of the calyx. 5. The brown rugged Seed. 6. One of the bractes and calyx, at the time the capsule is ripe, to show how much they are increased in size. 7. Young plant from seed, to show the acute lobed Cotyledons.

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TIGRIDIA conchiiflora.

Shell-flowered Tiger-flower.

Natural Order. IRIDEÆ. *Brown prodr.* 302.

TIGRIDIA. Perianthium 6-phyllum, petaloideum: foliolis 3 exterioribus magnis ovatis basi cucullatis sessilibus: *interioribus* minoribus unguiculatis sagittatis medio contractis. *Stamina* 3: *filamenta* omninò coalita. *Stigmata* 3, bipartita. *Capsula* oblonga, angulata.

T. *conchiiflora*, caule angulato, perianthii foliolis exterioribus oblongo-ovatis acutiusculis muticis: interioribus supra medium lato-ovatis acutis subtus concavo-foveolatis, germinibus obtuse trigonis planis.*

Root a bulb-tuber, clothed with a hard brown shell. *Leaves* lanceolately ensiform, acute, much plaited, resembling the leaflets of some species of Palms. *Stem* erect, or slightly flexuose, from 18 inches to 2 feet in height, slightly angular, and covered with a glaucous mealiness. *Spatha* of two leaves, which are lanceolate, acute, sharply keeled and glaucous: *bractes* several, membranaceous, lanceolate, acute, one between each flower. *Perianthium* of 6 petal-like leaflets; the 3 *outer ones* oblongly ovate, scarcely acute, narrowing at the base, concave nearly half way up, altogether forming a sort of bowl-like appearance at the base; the points at first spreading, afterwards reflexed and becoming at length revolute, yellow tinged with red, and marked from the bend to the base with numerous irregularly sized bright purple spots: the 3 *inner ones* small, unguiculate, contracted in the middle, sagittate below, the sides folded back, above the middle cordately ovate, acute, the points more or less reflexed, spotted all over on the upper side with numerous purple spots, on a bright yellow ground: about the middle underneath, terminated in an abrupt hole or pit, not running up in a channel as in T. *pavonia*. *Stamens* 3: *filaments* connected in a long cylindrical tube: *anthers* erect, linear,

* T. *paronia*, caule cylindrico, perianthii foliolis exterioribus lato-ovatis obtusis carinatis apice mucronatis: interioribus supra medium ellipticis acuminatis subtus concavo-canaliculatis, germinibus trisulcatis.

2-celled: *pollen* of a brownish yellow. *Germen* below the flower, bluntly 3-sided, the sides flat, double the size and not furrowed as in T. *pavonia*. *Style* about the length of the stamens, smooth, slender at the base, and thickened towards the point. *Stigmas* 3, each 2-parted, the segments filiform and spreading.

The bulbs of this splendid plant were first brought from Mexico last year, by Mr. Bullock, and flowered last Summer at the Nursery of Mr. Tate, in Sloane Street; at that time we believed it to be a mere variety of T. *pavonia*, but a careful examination of numerous specimens of both sorts in flower at the same time, determines us now to consider them as specifically different; besides the difference in the colour of the flowers, the present plant differs from T. *pavonia* in the outer leaflets of the perianthium being oblongly-ovate, and acute, without any mucrone at the point, and the back not keeled: the interior ones being broadly ovate above the middle and acute, not narrowly elliptic and acuminate, ending abruptly in a deep pit in the middle underneath, not regularly channelled from the base to the point; the germen in this is also double the breadth, with three flat sides: in T. *pavonia* it is deeply three-channelled. All those differences together, which has always proved permanent, in numerous living specimens which we have examined, certainly entitles it to rank as a distinct species. It requires precisely the same mode of culture as T. *pavonia*, to be planted out in the open borders in Spring, as early as the weather permits, in as light and sandy a soil as possible; after they have done flowering, and their leaves begin to fade, the roots must be taken up, and laid to dry, or hung up in bunches in a room, where the frost will not reach them, till the following Spring; if left in the ground all the Winter, they will require to be well covered, as the wet and frost will otherwise rot the roots. Our drawing was made at the Nursery of Mr. Colvill, in July last.

1. One of the inner leaflets of the Perianthium, to show the hollow terminated in the middle. 2. The 3 Stamens, showing the filaments connected into a long tube, the anthers spreading. 3. Germen, showing its flat sides, and terminated by the Style, and three bifid Stigmas.

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NUTTALLIA digitata.

Digitate-leaved Nuttallia.

Natural Order. MALVACEÆ. *DC. prodr.* 1. *p.* 429.
Div. II. *Calyx basi nudus.*
NUTTALLIA. Calyx 5-fidus, ecalyculatus, persistens. *Petala* 5, hypogyna, æqualia, patentia, basi connata. *Stamina* crebra, monadelpha; tubo stamineo unguibus petalorum adnato; *antheræ* oblongo-globosæ, peltatæ, uniloculares. *Ovarium* superum, 12-loculare. *Ovulum* 1 in quolibet loculo, axi centrali affixum. *Stylus* 12-fidus, fimbriatis. *Stigmata* simplicia. *Capsula* orbiculata, 12-cocca; *coccis* monospermis.—Herbæ *caulescentes denudatæ.* Folia *alterna palmatipartita: laciniis 3-partitis v. tridentatis.* Flores *terminales, subcorymboso-racemosi, pedunculati, purpureo-phœnicei.*

N. *digitata,* caule erecto ramoso apice aphyllo, foliis glaucescentibus: inferioribus palmato-partitis digitatisve: laciniis oblongis lanceolatisve obtusis tripartitis tridentatisve: caulinis tripartitis trifoliolatis simplicibusque linearibus acutis.
Nuttallia digitata. *Barton's Flora of N. Amer.* 2. *t.* 62. *Hooker exot. flor.* 171?
Callirhoe digitata. *Nuttall in Journ. of Acad. N. Sc. of Philadelphia, v.* II. *p.* 181.

Root perennial. *Stem* slender, smooth and glaucous, rush-like, producing a few leaves at the base; the upper part leafless, from 2 to 2½ feet in height, branching: *branches* slender, rush-like, terminated with a corymbose raceme of flowers. *Leaves* very variable, slightly pubescent on both sides: the bottom ones at the root palmately 5-parted, the segments oblong, obtuse, or with rounded points, 2 or 3-lobed or toothed, flat and spreading: the next digitately 5-parted nearly to the base, or with five leaflets: *leaflets* or *segments* 3-parted, or 2 or 3-lobed, lanceolate, bluntish: *upper leaves* 3-parted or trifoliate, or rarely simple, elongated, linear, acute, the sides bent inwards. *Flowers* terminal, corymbosely racemose. *Bractes* short, rather succulent, oblong or lanceolate, blunt or

often forked. *Peduncles* long, cylindrical, jointed, a little below the flower, smooth and glaucous. *Pedicles* above the joint increasing in size upwards. *Calyx* 5-cleft, naked, the base campanulate, pubescent, strongly nerved, the segments lanceolate, acute, spreading. *Petals* 5, all connected at the base and joined to the tube of the stamens, of a beautiful dark purple or crimson, much veined, the points notched or fimbriate, spreading flat, and distinct, bearded at the base on both sides. *Stamens* connected in a long tube, numerous: *filaments* spreading at the points and inserted in the back of the anthers: *anthers* nearly globular, inclining to oblong, furrowed in front, 1-celled: *pollen* white. *Ovarium* above the calyx, 12-locular, terminated by a 12-cleft *Style*, fringed near the point. *Stigmas* inconspicuous, simple.

Our drawing of this rare and handsome plant was taken from a specimen kindly presented to us by Robert Barclay, Esq. in August last, at which time we had the pleasure of viewing his richly stocked collection of rare and choice plants at Bury Hill. The choice American plants, in particular, were growing more luxuriantly and flowering in greater profusion, than ever we beheld them in any other collection; and amongst them we observed many new and very interesting species; and plants of this beautiful genus were flowering in great perfection in the open border in peat soil; the flowers are much finer and of a darker colour than those represented in Barton's Flora of North America, the figure of which appears to us to have been taken from a specimen that had been blown in a room in water, as one that flowered with us in that situation was as near as possible like his figure: the only method of propagating this elegant plant, appears to be by seeds, as we saw no appearance of shoots or suckers.

1. Calyx. 2. One of the Petals, showing how they are joined to the tube of the Stamens at the base, bearded on each side. 3. Stamens all connected into a tube at the base, the points spreading, and terminated by oblong globular 1-celled anthers. 4. The 12 celled Capsule terminated by a 12 cleft Style, the points spreading. 5. The seed attached to the back of the carpella.

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LUPINUS mutabilis.

Changeable-coloured Lupine.

Natural Order. LEGUMINOSÆ. *Juss. gen.* 345.
Subordo III. *PAPILIONACEÆ.*—Tribus V. *Corolla* irregularis papilionacea. *Stamina* decem, diadelpha. *Legumen* uniloculare bivalve. Frutices *aut* Herbæ; folia *simplicia aut ternata aut rariùs digitata;* stipulæ *nunc subnullæ, nunc conspicuæ imo petiolo adnatæ aut ab eodem distinctæ.* Juss. gen. 352.

LUPINUS. Calyx 2-fidus laciniis integris aut dentatis. *Carina* basi 2-partita. *Stamina* basi monadelpha: antheris 5 subrotundis, 5 oblongis. *Legumen* coriaceum oblongum polyspermum. Herbæ (*aut* frutices); folia *digitata*: stipulis *imo petiolo adnatis:* flores *spicati terminales, in spicâ alterni aut subverticillati, nudi aut bracteati.* Juss. gen. 354.

L. *mutabilis,* fruticosus erectus ramosus; ramis patentibus glaucis glabris, foliis digitatis glaucescentibus: foliolis 7-9 spatulato-lanceolatis obtusiusculis subtus subpubescentibus, calycibus subverticillatis inappendiculatis: labio superiore bifido; inferiore carinato acuto integro.

Stem fruticose, erect, much branched: *branches* spreading, slightly angular, quite destitute of hairs or pubescence, glaucous. *Leaves* digitate, of a pale glaucous green: *leaflets* 7 to 9, spatulately or oblongly lanceolate, obtuse, when young more acute, and tapering to a point; attenuated to the base, smooth on the upper side, and very shortly pubescent underneath, which cannot be seen without a lens. *Petioles* nearly cylindrical, gradually tapering upwards, smooth and glaucous. *Stipules* small, subulate, very taper-pointed, joined to the base of the petioles. *Peduncles* lateral, stiff, erect, cylindrical below the flowers, glaucous, between the flowers angular or 4-sided, the angles acute. *Flowers* in irregular whorls round the stem, generally 5 in each whorl, one at some distance above the others, delightfully fragrant. *Pedicles* cylindrical, smooth and glaucous. *Calyx* without any appendage,

2-lipped: upper lip about half the length of the Vexillum, shortly bifid, with 2 sharp points: lower one concave, keeled, sharp-pointed, entire. *Vexillum* broadly cordate, the sides reflexed, white tinged with blush, which changes to a light, and afterwards a darkish blue, with a large yellow mark in the centre: *alæ* or *wings* ovate, joined at the point, shortly unguiculate at the base, white, faintly striate: *keel* about the length of the wings, bulged a little in the middle, the point ascending and acute. *Stamens* 10, all connected into a tube, about half their length, the points distinct: *anthers* 10, the 5 upper ones globular, and the 5 lower ones oblong: *pollen* orange coloured. *Germen* silky. *Style* ascending, longer than the stamens, hairy at the base and smooth upwards. *Stigma* bearded.

Our drawing of this handsome and delightfully fragrant species was taken from a fine specimen, presented to us by the kindness of Robert Barclay, Esq. at Bury Hill, where it was growing luxuriantly in an open border, by the side of a wall, and was covered with its exquisitely scented flowers; and we have since been informed by Mr. D. Cameron, that it is perfecting its seeds; from its present appearance we expect it will be a frutescent species, and will thrive well in a warm border by the side of a wall, the same as L. *arboreus;* there are many other frutescent species native of South America, which we are in hopes of seeing shortly in the collections of this country; we cannot find any description that agrees with the present species, in any work that we have had the opportunity of examining, and we think there can be no doubt but it is quite new, as it was raised by Mr. Barclay, last spring, from seeds received by him from Bogato; it appears to thrive well in the common garden soil, and we expect it will strike freely from cuttings, planted under a hand-glass in the open ground.

1. Calyx. 2. Vexillum. 3. The 2 alæ or wings. 4. Keel. 5. The 10 Stamens united in a tube, the filaments distinct, terminated by 5 globular anthers and 5 oblong ones. 6. The same spread open. 7. Germen clothed with a silky down, terminated by the *Style* and bearded Stigma.

1825

ORNITHOGLOSSUM undulatum

Wave-leaved Bird's-tongue.

Natural Order. MELANTHACEÆ. *Brown prodr.* 1. *p.* 272.
ORNITHOGLOSSUM. Perianthium 6-phyllum, petaloideum, sessile, persistens. *Stamina* 6, receptaculo inserta, decidua. *Styli* 3, decidui. *Stigmata* inconspicua. *Capsula* 3-locularis, polysperma.

O. *undulatum*, foliis distichis canaliculato-lanceolatis crispato-undulatis acutis glaucis, scapo folioso subtrifloro, perianthii foliolis basi squamoso-foveolatis, filamentis basi et apice filiformibus medio crassis, stylis staminibus longioribus.

Root a bulb-tuber, large, solid, and covered with a brown shell similar to a Tulip. *Leaves* radical, distichous, 4 below the scape in our specimens, lower ones broadest, lanceolate, tapering to a point, channelled, clasping at the base, the margins curled, or much undulate, points slightly reflexed, of a glaucous colour, tinged with a brownish purple at the back and margins: those on the scape smaller, narrower, and not so much undulate. *Scape* short and stout, leafy, in our specimens producing three flowers. *Peduncles* nearly double the length of the leaves, stout and rigid, erect or slightly diverging, scarcely thickened at the summit, where it bends and produces a nodding flower, slightly glaucous. *Flowers* nodding, of a delightful fragrance in the evening, and at night, but without scent during the day. *Perianthium* of 6 leaflets, or sometimes only 5, persistent: *leaflets* narrowly lanceolate, acute, sessile, reflexed a little above the base, the points bending upwards, margins slightly bent inwards, green, marked with purple at the bend; at the base is a nectariferous pit, filled with honey, from which is produced a membranaceous scale, which is sometimes simple and acute, and sometimes bifid with acute points. *Stamens* 6, inserted in the receptacle:

filaments divergently spreading, of a curious shape, quite smooth, the lower part very slender and filiform, white, gradually thickening towards the middle, where it becomes very much thickened, tapering both ways, the upper part again slender, purple, slightly ascending, attached to the back of the anthers, near the middle: anthers 2-lobed, slightly sagittate at the base: *pollen* yellow. *Germen* smooth, oval, bluntly 3-sided, 3-channelled. *Styles* 3, filiform, divergently spreading, about one third longer than the stamens, straight, smooth, after being set with the pollen curling up. *Stigma* a simple blunt point.

Bulbs of this very curious plant were procured by Mr. Colvill, in July last, of Mr. Synnet, a Gentleman who had been residing in the interior of the Cape for several years, and in the mean time had made a choice collection of curious plants, of which he has brought seeds and bulbs to this country: many of the bulbs have already flowered, and the greater part prove new or very rare; when the bulbs were brought home, they were planted in pots, in an equal mixture of loam, peat, and sand, and were placed in the open air, where they are thriving very well, and a great number of them are showing for flower; we find, upon trial, that all the Cape bulbs may be grown with advantage in the open ground, by making up a bed of light sandy soil, and planting the bulbs from 4 to 8 inches deep, according to their size; they may be planted in April, and after they have done flowering, may be taken up and kept dry till the following spring, in the same manner as TIGRIDIA; or if left in the ground all the winter, they will require to be covered with some dry litter, or old tan, so as to keep the frost from the bulbs: the present plant is increased by offsets from the bulbs, or by seeds.

1. Two of the leaflets of the Perianthium, showing the scales at the base which enclose the honey. 2. The 6 Stamens inserted in the receptacle, showing the slender base and point and the swelling in the middle, the filaments attached to the back of the anthers. 3. Germen, terminated by the 3 spreading Styles and simple Stigmas.

2

ANAGALLIS indica.

Indian Pimpernel.

Natural Order. PRIMULACEÆ. *Brown prodr. 427.*
ANAGALLIS. Calyx 5-partitus. *Corolla* rotata, 5-fida. *Stamina* 5: *filamentis* hirsutis. *Stigma* 1. *Capsula* globosa, circumscissa polysperma: placenta centrali. Caulis 4-*angulus*. Folia *opposita*. Flores *solitarii axillares*.

A. *indica*, caule adscendente ramoso subalato, foliis sessilibus cordato-ovatis margine scabris obtusiusculis amplexicaulibus subquinquenerviis subtus punctatis, calycibus acute carinatis petalis dentatis paulo brevioribus.
Anagallis arvensis. *Wallich Flora indica. 2. p. 24. Thunb. jap. 83. nec aliorum.*

Annual. Stem erect, or ascending, branched: branches smooth, quadrangular, slightly winged. *Leaves* opposite, cordately ovate, minutely crenulate, or scabrous at the margins; bluntish, clasping the stem, 5-nerved at the base, and dotted underneath with numerous brown spots, points reflexed. *Peduncles* axillary, slender, a little longer than the leaves, erect when in flower, but deflexed when in fruit. *Calyx* 5-parted: segments lanceolate, acute, sharply keeled, with scariose membranaceous margins. *Corolla* rotate, 5-cleft, a little longer than the calyx, of a bright blue, purple at the base: segments distinct or slightly imbricate at the base; broadly obovate, deeply toothed or fimbriate. *Stamens* 5, inserted in the base of the corolla: *filaments* purple, and bearded with purple clubbed hairs, and attached to the anthers a little above their base; *pollen* bright yellow. *Style* smooth, purple. *Stigma* slightly capitate. *Capsule* globular, smooth,

opening about the middle, the top falling off. *Seeds* numerous, warted.

Seeds of this elegant little plant were given to Mr. Colvill, last year, by Mr. Hood, of South Lambeth, who received them from Nepaul; it proves to be a very hardy annual, requiring nothing more than to be sown in the open borders, and to be kept free from weeds; it will then produce its numerous bright blue flowers all the summer, and will ripen plenty of seeds. Dr. Wallich, in the Flora Indica, considers it the same species as our common A. *arvensis*, but it is certainly a very distinct one, but is most likely the A. *arvensis* of Thunberg, as Dr. Wallich observes; we think it nearer related to A. *arvensis* than it is to A. *cærulea*, but, in our opinion, it is sufficiently distinct from both; when grown in rich light soil, the leaves and flowers are larger than in our present specimen, which was rather a starved plant. The seeds should be sown the latter end of April, or the beginning of May, for if sown earlier they are liable to be injured by the frost or cold winds.

1. Calyx, showing its keeled segments. 2. The 5 Petals, with the Stamens attached to the base. 3. Stamen detached, to show the purple glandular hairs. 4. Germen, terminated by the Style and slightly capitate Stigma.

2

ŒNOTHERA serrulata.

Saw-leaved Œnothera.

Natural Order. ONAGRARIÆ. Jussieu.

ŒNOTHERA. Calyx tubulosus, cum ovario articulatus, deciduus; limbo 4-partito, reflexo. *Petala* 4, summo tubo inserta. *Stamina* 8, ibidem inserta, erecta aut declinata. *Antheræ* lineares, incumbentes. *Stigma* quadripartitum. *Capsula* prismatica aut clavata, 4-locularis, loculicido-quadrivalvis, nuda. *Semina* creberrima, nuda, affixa placentæ centrali, serius liberæ. Herbæ, *rarissime* suffrutices. Folia *alterna, sæpius dentata, sinuata, laciniata vel pinnatifida.* Flores *axillares solitarii aut terminales spicati.* Corollæ *flavæ, rarius aurantiacæ aut purpureæ.* Kunth synops. 3. p. 386.

Œ. serrulata, caule suffruticoso ramoso adscendente, foliis oblongo-linearibus serrulatis glabris subtus subpubescentibus, petalis integris stamina superantibus, stigmatibus capitatis subquadrilobis, capsula prismatica gracili sessili.

Œnothera serrulata. *Nuttall. gen. amer.* 1. *p.* 246. *Hook. exot. flor. t.* 140. *Spreng. syst. veg.* 2. *p.* 228.

Stem suffruticose at the base, much branched, spreading: *branches* slender, thickened upwards, ascending, clothed with short incurved hairs. *Leaves* narrow, sessile, oblongly linear, acute, mucronate, sharply serrulate, with long slender teeth, smooth and glossy; underneath slightly pubescent, narrowly attenuated at the base. *Flowers* axillary, solitary, sessile, of a bright yellow colour. *Calyx* superior, before expansion acutely 4-angled; afterwards funnel-form, 4-angled, 4-cleft: the segments spreading or reflexed, oblong or narrowly ovate, concave, sharply keeled at the back, taper-pointed. *Petals* 4, inserted in the calyx, spreading, obovate, entire, or with slightly crenulate margins, more or less crumpled and striate, about double the

length of the stamens. *Stamens* 8, inserted in the mouth of the calyx: *filaments* short, attached to the back of the anthers, which are linear, 2-celled, and burst by the sides to discharge the pollen. *Style* smooth, about the length of the stamens. *Stigma* capitate, dark purple, or nearly black, flat at the top, slightly 4-lobed. *Capsule* slender, nearly cylindrical, 4-sulcate, 4-valved.

This very distinct species, which is readily distinguished from all others with which we are acquainted, by its capitate 4-lobed Stigma, is a native of North America; where it was first discovered by Mr. Thomas Nuttall, who describes it as growing from the river Platte to the mountains, on dry hills, flowering in June; with us it flowers from June to October, and is a very handsome hardy perennial plant.

Our drawing was taken from a specimen, kindly presented to us by Robert Barclay, Esq. from his choice collection at Bury Hill, in August last, and was from a plant that had been received from Mr. Nuttall: it succeeds well in the open borders in a light rich soil, and may be propagated by cuttings planted under a hand-glass, or by seeds, which will ripen plentifully, if some pollen be attached to the stigmas when in bloom.

1. The 4-cleft Calyx seated on the germen. 2. The tube spread open, to show the 8 Stamens inserted in the mouth, the filaments attached to the back of the anthers. 3. Germen, terminated by the Style and slightly 4-lobed Stigma.

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ERYTHROLÆNA conspicua.

Conspicuous Erythrolæna.

Natural Order. COMPOSITÆ. *Adanson fam.* 2. 103.
Sect. II. *CARDUACEÆ. Kunth synops.* 2. *p.* 354.
3) *Carduaceæ veræ.*

ERYTHROLÆNA. Involucrum conicum; foliolis acuminatis, interioribus imbricatis integerrimis, exterioribus reflexis spinoso-dentatis. *Receptaculum* convexum, pilosum. *Flosculi* omnes hermaphroditi, tubulosi: *limbo* altæ quinquepartito: *laciniis* linearibus apice incrassatis: *tubum* 5-angulum basi angustatum. *Filamenta* glanduloso-pilosa. *Antheræ* basi bisetosæ. *Stigma* bifidum; laciniis approximatis. *Pappus* sessilis, plumosus.

E. *conspicua,* caule erecto ramoso, foliis inferioribus laciniato-pinnatifidis subpubescentibus supra atroviridibus nitentibus subtus pallidis reticulato-venosis: segmentis divaricatis spinoso-dentatis undulatis; superioribus lanceolatis spinoso-dentatis, involucro glabro: foliolis lanceolatis acuminatis.

Biennial? *Stem,* in our specimen, 8 feet high, with 18 branches, clothed with a loose woolly down, furrowed with numerous channels, more or less of a purple colour: *branches* erect, or slightly spreading, downy. *Leaves* very stiff and rigid, those at the base laciniately pinnatifid, above 2 feet long, and more than a foot in breadth; more or less pubescent on both sides, the upper side of a dark glossy green, underneath paler, and reticulately veined: segments divaricately spreading, undulate, laciniately toothed, the points and teeth terminated with strong sharp spines, which point in various directions; *stem-leaves* sessile, or half clasping the stem, lanceolate, taper-pointed, very much undulate, sinuately toothed, armed with strong spines, and smaller ones intermixed, the spines pointing various ways, as in the large leaves. *Flowers* terminal and axillary, clustered at the end of the main stem, erect before expansion, a little nodding when expanded, and more so when overblown. *Peduncles* striate, thickly clothed with a dense woolly down, generally producing a leaf at the base, or a little below the flower. *Involucre* regularly conical, tapering to a slender point before expansion, of a bright glossy scarlet: *lower leaflets* broadest, lanceolate, widened at the base,

reflexed from about the middle, and terminated with a sharp spine, of a greenish purple colour, the margins ciliated with short spines: *inner leaflets* narrowly lanceolate, closely imbricate, taper-pointed, entire, a little keeled near the point, of a glossy scarlet, lighter at the base. *Receptacle* convex, densely clothed with long simple white hairs. *Florets* tubular, all fertile, 5-angular, very slender below the insertion of the stamens: 5-nerved, *limb* 5-cleft, the segments nearly as long as the tube, very narrow, and clavate at the point. *Stamens* 5, inserted in the tube, the *filaments* long and slender, distinct, thickly clothed with glandular hairs: *anthers* connected into a tube, but distinct at the points, each having 2 little bristles at the base. *Style* long, exserted, smooth, purple towards the point. *Stigma* purple, at first appearing entire, but at length bifid, the segments erect, and close together. *Seed* bluntly quadrangular, terminated by a pappus of long feathered hairs.

For the opportunity of giving a figure of this new and grand plant, we are indebted to the liberality of Robert Barclay, Esq. who sent us fine flowering specimens in October last, that were blown in the open border of his garden at Bury Hill, and, we believe, for the first time in Europe. Mr. Barclay had received the plant from the Nursery of Mr. Tate, in Sloane Street, who raised it from seeds brought from Mexico, by Mr. Bullock, under the name of the Scarlet Thistle. It certainly is one of the finest and most conspicuous plants that we ever beheld; at the time that we had the pleasure of seeing it, before the blossoms were expanded, we were quite struck with surprise at the brilliancy of its glossy scarlet Involucres, and we were informed by Mr. D. Cameron, when we received the specimens, that it had attained the height of 8 feet, with 18 branches of flowers, besides its terminal head, so that its magnificence is scarcely to be described.

1. Involucre cut through the centre, to show the convex receptacle, densely clothed with long hairs. 2. Floret, showing its slender base, and its 5 long segments, with the stamens and style in the centre. 3. The 5 Stamens divested of the floret, showing the 5 connected anthers with the two aristas at the base of each, the filaments distinct and thickly clothed with glandular hairs. 4. Seed, terminated by a feathered pappus. 5. One of the hairs detached, to show its feathered sides.

HYACINTHUS amethystînus.

Amethyst-coloured Hyacinth.

Natural Order. ASPHODELEÆ. *Brown prodr.* 1. *p.* 274.
Div. III. Flores spicati. Radix bulbosa. Perianthium basi tubulosum.
HYACINTHUS. Perianthium campanulatum, 6-fidum: laciniis reflexis. *Stamina* 6, tubo medio inserta. *Stigma* 1. *Ovarium* apice 3-porosum.

H. *amethystinus*, perianthiis campanulatis semisexfidis basi cylindricis.
Hyacinthus amethystinus. *Willden. sp. pl.* 2. *p.* 167. *excl. syn. Pallasii. Pers. syn.* 1. *p.* 375. *Hort. Kew. ed.* 2. *v.* 2 *p.* 282. *Redouté Lil.* 14. *Botan. magaz.* 2425.

Root bulbous. *Leaves* several, radiately spreading, the points ascending, elongately linear, deeply channelled on the upper side, from the sides folding inwards; the lower side bluntly keeled, and sulcate with numerous shallow furrows, of a lightish green inclining to glaucous, and tinged with purple at the base. *Scape* erect, from 6 to 9 inches high, cylindrical, smooth and glossy, purple towards the base. *Racemes* from 6 to 12-flowered, the flowers nodding, of a light blue with dark veins. *Bractes* sheathing the pedicles, membranaceous, linearly subulate, taper-pointed. *Pedicles* nodding, bent round like a bow, but becoming erect when in fruit. *Perianthium* campanulate, tubular, 6-cleft, tube cylindrical, segments spreading, the points reflexed. *Stamens* 6, inserted in the middle of the tube, and included within the mouth: *filaments* short, smooth, attached to the back of the anthers. *Germen* with 3 nectariferous pores at the point. *Style* smooth below the stamens. *Stigma* a simple point.

Our drawing of this handsome and rare plant, was taken at the Garden belonging to the Apothecaries'

Company at Chelsea last June, where a fine row of them were flowering very strong and luxuriant; the difference between our figure, and the one already published in the Botanical Magazine, is, as Mr. Anderson observes, owing to the latter figure having been made from a weak specimen, which flowered the same year that the bulbs were imported, and consequently was not so perfect as the present, which was drawn from a strong specimen; as the bulbs appear to thrive so well with Mr. Anderson, we hope this hitherto rare plant will soon become more common; and we have no doubt but it would perfect plenty of seeds, if a little pains were taken to fertilize the stigmas with the pollen when in bloom. A light sandy soil is the most congenial to the present, and nearly all other bulbous rooted plants, and a dry bottom, for if they get sodden with too much moisture, they will be very liable to rot, so that when beds are prepared for bulbs, they should be raised up a good height, in the same manner as Tulip beds are made by the Florists; the bulbs can then be planted a good depth, out of the reach of frost, and can be covered occasionally with mats or dry litter in severe frost, or when there is a superabundance of wet weather; and we have no doubt but the whole of the Cape bulbs might be grown in that way, and would flower much finer than in the way they have generally been grown; but of this we shall have more to say in some of our future Numbers.

1. Perianthium spread open, to show the insertion of the 6 Stamens. 2. The Germen, terminated by the Style, and small Stigma.

POTENTILLA formosa.

Handsome Nepaul Cinquefoil.

Natural Order. ROSACEÆ. *Juss. gen.* 334.
Tribus II. *POTENTILLÆ. Kunth synops. v.* 3. *p.* 464. *Supra, fol.* 124.
POTENTILLA. Supra, fol. 124.

P. *formosa,* opaco-virens, pilosa, foliis radicalibus quinatis; caulinis ternatis: foliolis cuneato-oblongis serratis, stipulis amplis adnatis integerrimis, petalis obcordatis, caule decumbente ramoso. *Don prodr. fl. nepal. p.* 232—233.
Potentilla nepalensis. *Hooker exot. flor. t.* 88.

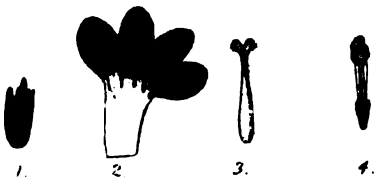
A very handsome perennial herbaceous plant. *Leaves* at the root quinate with long stout petioles, that are more or less tinged with purple, and densely clothed with long unequal spreading villous hairs: *leaflets* oblong or wedge-shaped, slender at the base, sharply serrate, the teeth rounded but acute, finely ciliate, rugose, strongly nerved on the under side, and furrowed on the upper, reticulately veined, hairy on both sides, but mostly underneath, of an opaque green colour, lightest underneath: *stem leaves* ternate, with very short footstalks: leaflets narrower and rather more acute: *terminal leaves* simple, oblong, acute, and less rugose. *Stipules* large, leaf-like, oblongly ovate, acute, entire, strongly ciliate, and joined to the footstalks of the leaves. *Flower-stems* numerous, decumbent, the upper part ascending, nearly cylindrical, very much branched, densely clothed with long, spreading, unequal, villous hairs, as are the peduncles, bractes, and calyx: *branches* much spreading, more or less tinged with purple, forked at every joint, and producing a flower betwixt each fork. *Peduncle* stout, cylindrical, purplish. *Calyx* 5-parted, segments spreading, ovate, acute, strongly nerved, the base and nerves purple. *Bractes* 5, attached to the calyx, lanceolate, acute, flat, or the mar-

gins slightly reflexed near the base, horizontally spreading, longer than the segments of the calyx. *Petals* 5, obcordate, nearly double the length of the calyx, unguiculate at the base, of a light pink or rose colour, with a dark crimson spot at the base, from which branch numerous lines that spread all over the petals. *Stamens* 20, inserted in the calyx, and surrounding the carpella, unequal in length, and spreading in various directions: *filaments* smooth, purple; *pollen* yellow. *Carpella* numerous, smooth and glossy. *Styles* numerous, purple, terminated by small blunt *Stigmas*.

This is the second handsome species of this genus that we have received from Nepaul, and we can scarcely say which is the most beautiful of the two; they both appear to be quite hardy, though it would be best to keep some plants of each in pots, and preserve them in frames through the winter, in case it be very severe. We have adopted the name given by Mr. D. Don, in his Prodromus Floræ Nepalensis, in preference to the one previously published by Dr. Hooker; as there are already so many Nepaul species discovered, the name of *nepalensis* appears exceptionable, particularly as some of them are probably more common in Nepaul than the present.

Our drawing was taken from some strong plants at the Nursery of Messrs. Whitley, Brames, and Milne, at Fulham, in August last; we also have a drawing taken at the same time, of another handsome Nepaul species, with yellow flowers, but elegant silvery leaves; P. *splendens* of Don, P. *lineata* of Treviranus, in Sprengel's Systema Vegetabilium; in our opinion, it is as handsome as either of the others, particularly when grown strong in the open borders, as we observed it in the collection of Mr. Barclay at Bury Hill: they all increase readily by seeds, which ripen plentifully.

1. Calyx, showing the 5 spreading bractes between the 5 upright segments. 2. The Stamens spread open, to show their unequal lengths. 3. The Carpella attached to the receptacle, each terminated by its style and stigma. 4. One of them detached, to show its shape, also terminated by the style and small blunt stigma.



E. D. Smith Del. Pub. by R. Sweet, Jan. 1826. Weddell Sc.

ERYTHRÆA aggregata.

Cluster-branched Erythræa.

Natural Order. GENTIANEÆ. *Brown prodr.* 1. *p.* 449.
Sect. I. Capsula unilocularis, nunc semibilocularis.
ERYTHRÆA. Calyx 5-fidus. *Corolla* infundibuliformis, limbo brevi, marcescens. *Antheræ* defloratæ spirales. *Stylus* erectus. *Stigmata* 2, subrotunda. *Capsula* linearis. *Brown prodr.* 1. *p.* 451.

E. *aggregata,* caule tetragono ramosissimo decumbente: ramis dichotomis aggregatis paucifloris, foliis spathulatis obtusis uninervibus basi in petiolum attenuatis, floribus sessilibus, bracteis linearibus obtusis calyce sublongioribus, calyce tubo duplo breviore.

Perennial? or perhaps *biennial?* Scarcely 3 inches high, very much branched: *branches* short, dichotomous, decumbent, points ascending, 4-sided, furrowed, smooth and glossy. *Leaves* opposite, spathulate, obtuse, entire, 1-nerved, attenuated at the base into a kind of petiole, smooth and glossy. *Flowers* sessile, from 2 to 5, terminating a branch: *outer bractes* oblongly linear, obtuse, a little longer than the calyx, *inner ones* very small, and much shorter. *Calyx* 5-cleft, *segments* subulately linear, taper-pointed, keeled, with membranaceous margins, about half the length of the tube of the corolla. *Corolla* funnel-form; *tube* twice the length of the calyx, striate: *limb* 5-cleft, segments equal, oval with rounded points, concave, of a glossy rose colour. *Stamens* 5, inserted in the mouth of the tube, shorter than the segments of the corolla: *filaments* smooth: *anthers* twisted; *pollen* yellow. *Germen* linear, smooth. *Style* smooth, thickening upwards. *Stigmas* 2, capitate.

This very pretty little plant was raised from seed at the Nursery of Mr. Colvill, in 1824; the seeds were procured by Mr. Hunneman, who received them from Germany, under the name that we have adopted; we do not find any character that will agree with the plant either in Rœmer and Schulte's, or in Professor Sprengel's Systema Vegetabilium; we therefore believe it to be a new species. The plants began to flower when they were scarcely two inches in height; and the following Spring they began flowering in March, and continued to flower all the Summer, and till the middle of November; we believe it will prove perennial, but are not certain whether it may be more than biennial; our plants have ripened abundance of seeds, so that there will be no danger of their being lost. We consider it as one of the most beautiful little plants for adorning rock-work; it also makes a pretty appearance when grown in small pots; the best soil for it is a mixture of light sandy loam and peat, or any other light soil: the seeds of it sown as soon as ripened, will make nice flowering plants for the next Spring, if kept in a sheltered situation.

Several species of this genus are natives of Britain; they are all very handsome annuals, and well deserving a place in the Flower-garden amongst other hardy annuals, much more so than many that are there cultivated; one reason we suspect is, that they are not sufficiently well known; but we are in hopes that this hint will bring them into notice.

1. Calyx. 2. Corolla spread open, to show the insertion of the Stamens. 3. Germen, terminated by the short Style and bilamelate Stigma. 4. Stamens showing its twisted anthers.

D. Smith. Del. Pub. by R. Sweet. Jan. 1826. Weddell sc.

GEISSORHIZA vaginata.

Sheathed Geissorhiza.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.
GEISSORHIZA. Spatha tubum corollæ subæquans. *Perianthium* corollaceum, subinfundibuliforme: limbo sexpartito, regulari. *Stamina* 3, erecta. *Stylus* inclinatus. *Stigmata* 3, latiuscula, fimbriata. *Capsula* membranacea, 3-gona. *Semina* minima.

G. *vaginata*, foliis ensiformibus acutis falcatis nervoso-plicatis glaucescentibus basi tubuloso-vaginantibus, scapo subramoso paucifloro, tubo perianthii brevissimo: laciniis patentibus basi macula obcordata notatis.

Root a bulb-tuber, flattish, clothed with a hard brown shell. *Leaves* about 4, ensiform, acute, falcate or obliquely bent, strongly nerved and plaited, hollow or fistulose, glaucous, the base sheathing the scape for a great length. *Scape* divided, or 2 scapes proceeding from the same sheath, cylindrical, glaucous, each producing 2 or 3 flowers. *Spathe* 2-valved; outer one leaf-like, nearly 3 times the length of the tube, lanceolate, acute, striate; inner one scarcely more than half the length, with membranaceous edges. *Flowers* very large and handsome. *Perianthium* petal like: the tube very short, slender at the base and widening upwards: limb deeply 6-cleft, the segments nearly equal, spreading, elliptic, bluntish, concave, of a bright yellow, each marked at the base with an obcordate dark purple or velvet spot; the three outer ones having a large dark velvet patch at the point, edged with yellow, which extends nearly half way down, and which the back is more or less tinged all over with: inner ones with only a small spot at the point, but larger in some flowers than in others. *Stamens* 3, erect, inserted in the base of the outer segments of the limb: *filaments* short and smooth, purple: *anthers* very long, linear, sagittate at the base: *pollen* pale yellow. *Style* shorter than the tube. *Stigmas* 3, slender, spreading, a little above the base of the anthers, the points a little thickened and divided, slightly fimbriate.

This very handsome species is nearer related to G. *obtusata*, than to any other with which we are acquainted; it is one of the bulbs which we have already mentioned, as having been brought from the interior of the Cape by Mr. Synnet, who resided there several years, and in the mean time made a choice collection of handsome and curious plants; many of the bulbs brought by him have already flowered, and most of them prove to be new or very rare species, which we intend to publish, with an account of their treatment, in the present work. When the bulbs were received, they were planted in pots, in a mixture of loam, peat, and sand, rather more loam than peat, the latter being chiefly for the purpose of keeping the loam from binding and becoming hard, and full one third of fine sand, all mixed well together; the pots were then exposed to the open air, where they began to grow rapidly, and soon produced their flowers in abundance: but we consider the best method of growing them in perfection to be the same as is generally practised for growing choice Tulips and other bulbous roots by the florists, to make a bed about 18 inches in height, a little sloping on each side, and in as sheltered a situation as convenient: the bed to be composed of light soil, and as sandy as possible; or a composition made up of the same materials as already noticed for growing them in pots, would answer exceedingly well, if it can be readily procured; the bulbs will then flower strong, and will increase in size for the following season: the best time for planting them out, is the latter end of March, or the beginning of April, according as the weather suits; the large bulbs may be planted 6 or 8 inches deep, and the smaller ones 3 or 4, according to their size; as soon as they have done flowering, and their stems are decaying, they may be taken up and kept dry, where the frost cannot reach them, till the following Spring; or if left in the ground, they must be well covered with rotten tan, or some dry covering in Winter.

Drawn at Mr. Colvill's Nursery, in September.

1. The 2-valved Spathe, showing the lines and membranaceous margins. 2. The 3 Stamens inserted in the upper part of the tube, the tube spread open, and divested of the segments. 3. Germen, terminated by the Styles and 3 Stigmas.

Pub.by R.Sweet. Jan. 1826.

GENTIANA crinita.

Jagged-flowered Gentian.

Natural Order. GENTIANEÆ. *Brown prodr.* 449.
Sect. I. Capsula unilocularis, nunc semibilocularis.
GENTIANA. Calyx 4-5-fidus. *Corolla* infundibuliformis aut hypocrateriformis, 4-5-fida, fauce nudâ. *Stigma* bilobum. *Semina* immarginata. *Brown prodr.* 1. *p.* 450.

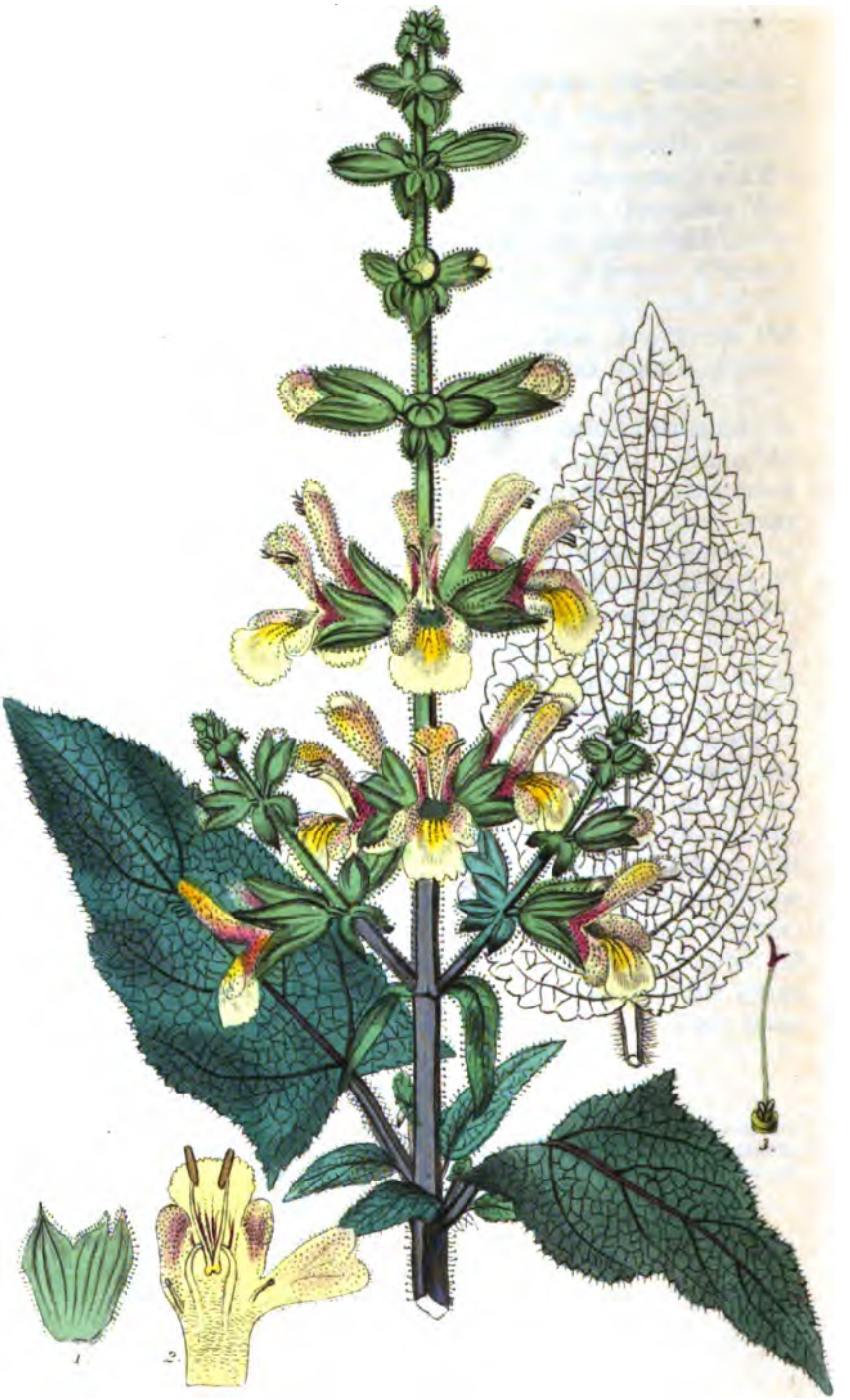
G. *crinita*, caule erecto basi tereti, ramis angulatis unifloris, foliis amplexicaulibus lato-lanceolatis acutis, calycibus tetragonis acuminatis; segmentis alternis membranaceo-marginatis; corollis quadrifidis; laciniis obovatis inciso-fimbriatis.
Gentiana crinita. *Froelich Gent. p.* 112. *n.* 44. *Willden. sp. pl.* 1. *p.* 1352. *Persoon Syn.* 1. *p.* 287. *Pursh fl. amer. sept.* 1. *p.* 185. *Rœm. et Schult. syst.* 6. *p.* 175. *Spreng. syst. veg.* 1. *p.* 859. *Botan. magaz.* 2031.
Gentiana fimbriata. *Andrews's reposit.* 509.

Biennial. Stem erect, smooth and glossy, tinged with purple, round at the base, and slightly angular upwards, from 1 to 1½ feet in height, branching on the upper part: *branches* quadrangular, erect, each terminated by a single flower. *Leaves* opposite, crossing each other, broadly lanceolate, acute, rounded at the base and clasping the stem, lower ones longer than the joints, upper ones not the length of the joints, smooth and glossy, strongly keeled underneath. *Peduncles* quadrangular, a little thicker under the calyx, into which the angles extend, smooth and glossy. *Calyx* quadrangular or sharply 4 keeled, deeply 4-cleft, the segments taper-pointed, 2 alternate ones rather broadest, and edged with a coloured membranaceous margin, the other two rather longer, more taper-pointed and naked, all sharply keeled. *Corolla* 4-cleft, of a bright blue, or slightly tinged with purple, about 2 inches in length, tube elegantly striped inside, with 4 large green

glands a little above the base, between the filaments: segments broadly obovate, spreading, deeply jagged or elegantly fringed round the edges, the mouth naked. *Stamens* 4, inserted in the tube, and connected to it for some way up: *filaments* flat, concave, tapering upwards, smooth, hairy at the bottom, attached to the back of the anthers: *pollen* bright yellow. *Germen* quadrangular, tapering to the bottom and also at the point. *Stigmas* 2, broadly lamellate, hairy on the upper side, the points reflexed. *Seeds* rough, tuberculate.

Our drawing of this handsome species was made in October last, at the Nursery of Mr. Colvill, where the plant had been preserved, with many others, that came up accidentally in the mould that was received from North America about the roots of other plants; it came up in the Autumn of 1824, and flowered and ripened its seeds the following Autumn, when it died; so that it can only be considered a biennial; the best soil for it is the greater part peat, and a little loam mixed with it, and it may either be grown in the open ground or in pots; in the former way it will grow and flower the strongest; as soon as the seeds are ripe, and become sufficiently hardened, they should be sown; the young plants will then come up, and flower the following Autumn; but if left till Spring, they will not come up so readily, and will not flower until the following season; but they will then flower earlier, and their seeds will be better ripened; care must be taken to keep the young plants from snails and slugs or other insects, and also to keep them clear from weeds.

1. Calyx, showing its unequal segments, the 2 broader ones with membranaceous margins. 2. Corolla spread open, to show the insertion of the stamens, and the 4 green glands between them. 3. Stamen detached. 4. Germen, terminated by the bilamellate Stigma.



E.H. Smith Del. Pub by R. Sweet Jan. 1826. Waddell Sc

SALVIA nubicola.

Nepaul mountain Sage.

Natural Order. LABIATÆ. *Brown prodr.* 1. *p.* 499.
Sect. I. Stamina 2 fertilia; v. dum 4 fertilia. Antheræ omnium dimidiatæ.
SALVIA. Supra, fol. 26.
Sect. 1. *Calyce trilobo ampliato.* Div. 1. *Foliis simplicibus.*

S. *nubicola,* caule erecto tetragono villoso apice ramoso, foliis petiolatis hastato oblongis acutis crenatis basi subcordatis rugosis reticulato-venosis, floribus verticillatis longe racemosis, bracteis ovatis reflexis; verticillis 6-floris, calycibus sulcatis glutinoso-pilosis, corollis villosis: labio inferiori dentato-crenato.
Salvia nubicola. *Wallich Mss.*

Root perennial. *Stems* in our specimens about 3 feet high, hard and suffrutescent at the base, branching on the upper part, bluntly 4-sided: *branches* purple, thickly clothed with soft villous unequal white hairs. *Leaves* opposite, with long footstalks, rugose, reticulately veined, crenate; *lower ones* oblongly ovate, acute, hastate, slightly cordate, strongly three-nerved from the base, the nerves branching in all directions: *upper ones* narrowly oblong, also hastate and slightly cordate, acute, very much notched at the margins, the notches rounded and shallow: *those near the flowers* lanceolate, not hastate or cordate; all clothed slightly on both sides with a soft pubescence, which occasions a soft feel to the leaf. *Petioles* clasping the stem at the base, deeply channelled on the upper side and convex on the lower, thickly clothed with unequal spreading villous hairs. *Flowers* in a long terminal raceme, whorled, 6 in each whorl. *Bractes* 6 to 8, ovate, acute, ciliate, very unequal in size, all reflexed. *Peduncles*

shorter than the bractes, glutinous, hairy. *Calyx* narrow at the base and widened at the point, two lipped, many-nerved and sulcate, very glutinous and hairy; upper lip entire and sharp-pointed; lower one 2-cleft, the segments with sharp points. *Corolla* tubular, 2-lipped, clothed with villous down, yellow, irregularly spotted and marked with brown, particularly on the helmet or upper lip, which when spread out is nearly obcordate, or 2-lobed, but those are connivent, which gives an appearance of being entire and pointed; lower lip 3-lobed; terminal lobe large and rounded, cucullate, elegantly crenate or toothed, of a bright pale yellow: side ones smaller, imbricate over the large one, spathulate, faintly spotted. *Stamens* 2 fertile and 2 sterile, all inserted in the tube: fertile ones jointed about the middle, where a spur proceeds from each and joins them together, the points declining: *anthers* linear: *pollen* yellow. *Style* smooth, about the length of the stamens. *Stigma* bifid, purple, the segments unequal in length. *Seeds* 4, naked, seated on a fleshy yellow crown.

This very distinct species of Salvia is a native of the high mountains of Nepaul, growing, as the specific name implies, up amongst the clouds: the plants from which our drawing was made, was raised at the Nursery of Mr. Colvill, in 1823, from seeds given him by Mr. Hood, of South Lambeth, with seeds of many other curious plants from the same country; the present plants have attained the height of 3 feet, and did not produce their flowers until last October; they appear to thrive well in the common garden soil, and may be increased by dividing at the root, or by cuttings planted under hand-glasses; but they do not appear to perfect any seeds at present.

1. Calyx, showing its 5 segments, and the viscous glandular hairs. 2. Corolla spread open, to show the 2 sterile and 2 fertile Stamens, the filaments on the fertile ones jointed, and connected by a process at the joint. 3. The 4 naked Seeds, seated on a crown, terminated by the smooth Style and unequally bipartite Stigma.

Pub. by R. Sweet. Feb. 1816.

TAGETES tenuifolia.

Slender-leaved Tagetes.

Natural Order. COMPOSITÆ. *Adanson fam.* 2. 103.
Sect. IV. *JACOBEÆ. Kunth Synops.* 2. *p.* 440.
TAGETES. Involucrum tubulosum, dentatum. *Receptaculum* nudum. *Flosculi* disci tubulosi, hermaphroditi; *radii* ligulati, feminei. *Antheræ* basi nudæ. *Akenia* lineari, compresso-complanata, coronata squamis 3-6 inæqualibus.—Herbæ *foliis oppositis aut alternis, pinnatis, interdum bipinnato-multifidis aut simplicibus involucrisque glanduloso-punctatis.* Flores *terminales, rarissime axillares.* Radius *luteus aut fulvus.* Kunth loc. cit. p. 460.

T. *tenuifolia,* caule erecto ramoso; ramis patulis obtuse 4-angulis glabris, foliis pinnatis: foliolis multijugis oppositis alternisque lanceolatis argute serratis longe aristatis; superioribus horizontalibus; inferioribus lunulato-recurvis, floribus terminalibus et axillaribus, pedunculis subtrifloris, involucro clavato-tubuloso 5-angulato, squamis pappi duabus; exteriore breviore truncata; interiorem lanceolatam involvente.
Tagetes tenuifolia. *Cavan. Ic.* 2. *t.* 169. *Willden. sp.* 3. *p.* 2128. *Kunth. synops.* 2. *p.* 461.

Annual. Stem erect, from 2 to 3 feet high, much branched: *branches* spreading, bluntly quadrangular, furrowed, smooth and glossy, more or less purple, particularly on the lower part. *Leaves* opposite, pinnate, smooth and glossy: *leaflets* numerous, opposite and alternate, lanceolate, acute, sharply serrate, tipped with a long arista: *upper ones* horizontally spreading; *lower ones* lunulately recurved, all glandularly dotted. *Flowers* terminal and axillary, bright yellow. *Peduncles* leafy, generally 3-flowered, furrowed, and bluntly quadrangular, smooth, and glossy. *Pedicles* bluntly quadrangular, thickened upwards, hollow. *Involucre* tubular, clavate, 5-angular, 5-toothed, smooth, slightly glaucous: the teeth short, acute, and glandularly punctate. *Receptacle* convex, naked, dotted. *Rays* 5, large, obcordate, spreading flat, bearing a style and bifid stigma, but no stamens, and producing perfect seeds. *Florets of the disk* numerous, tubular, 5-cleft, producing both stamens and style, strongly 5-nerved, the nerves

alternating with the segments. *Stamens* 5, inserted in the tube; *filaments* distinct, smooth: *anthers* connected into a tube, naked, the points distinct. *Style* smooth, exserted beyond the stamens. *Stigma* bifid, the segments spreading, club-shaped, fimbriate. *Seeds* linear, flat, rough, and pubescent. *Pappus* consisting of 2 paleaceous scales, those attached to the ray nearly equal in length, one very slender, the other broad, truncate, and surrounding the tube; those attached to the florets of the disk very unequal, one of them slender, double the length of the other, and acute, the other broad, truncate, emarginate and toothed, surrounding the tube of the floret.

This very pretty annual plant is a native of Mexico, and was raised last Summer at the Nursery of Mr. Colvill, from seeds given us by Lady Johnstone, with numerous seeds of other curious plants, which Sir Alexander Johnstone had just received from that interesting country, and many of which are now thriving in Mr. Colvill's Nursery; amongst those that are raised, are *Arbutus laurifolia*, *Alstrœmeria ovata*, *Fuchsia arborescens*, and a plant of the curious *Chilopsis linearis* (the *Bignonia? linearis* of Cavanilles Icones, t. 262.) we are in hopes that the latter plant will prove hardy, as it seems to be of a deciduous nature. *Arbutus laurifolia* will probably also prove hardy, as we find it thrive much better in a greenhouse than in the hothouse.

As the present is a late Autumn-flowering plant, the seeds of it should be sown early in Spring, that it may be forward to flower in good time; if sown on a little heat, or in the greenhouse, towards the end of February, and when the plants are 2 or 3 inches high, to pot them off 2 or 3 in a pot, they will be gaining strength; they can then be turned out, and planted into the flower borders in April, and will come into flower fine, in Autumn; it will also be well to keep a few of them in pots, as they can be removed into the house, if the Winter set in early before they have ripened their seeds.

1. The Involucre, showing the angles and 5 teeth. 2. The naked dotted Receptacle. 3. One of the Rays, showing the seed at the base, and the short Style and bifid Stigma. 4. Floret of the disk, spread open. 5. The 5 Stamens, spread open, the anthers all joined, the filaments distinct. 6. Seed from the disk, showing the unequal paleaceous pappus, and terminated by a smooth Style, and 2-clubbed fimbriate Stigmas. 7. The 2 unequal paleaceous scales.

D. Smith Del.

Pub. by R. Jewet Feb. 1826.

Waddell Sc.

ERYTHRINA laurifolia.

Laurel-leaved Coral-tree.

Natural Order. LEGUMINOSÆ. *Juss. gen.* 345.

Subordo I. *PAPILIONACEÆ. Embryo* homotropus pleurorhizeus nempè radiculâ super loborum commissuram pronâ. *Sepala* per æstivationem imbricata aut subvalvata. *Petala* in corollam papilionaceam disposita, semper ideò irregularia, staminaque imò calyci inserta seu perigyna. Folia *simplicia aut simpliciter composita, nunquam bi nec tripinnata.* DC. prodr. 2. p. 94.

Tribus V. PHASEOLEÆ. *Corolla* papilionacea. *Stamina* monadelpha aut sæpiùs diadelpha (9 et 1). *Legumen* polyspermum dehiscens continuum membranis cellulosis transversis inter semina sitis sæpè subdivisum non verè articulatum. *Radicula* super loborum commissuram inflexa. *Cotyledones* crassæ per germinationem immutatæ aut in folia crassa vix stomatibus donata conversæ, extrà terram et sæpiùs extrà spermodermium exsertæ. *Folia* primordialia opposita! omnium foliola numero imparia sæpius pinnatim, rariùs palmatim disposita. *DC. prodr. 2. p.* 381.

ERYTHRINA. Calyx tubulosus ore truncato subdentato aut spathaceus. *Corollæ vexillum* longissimum oblongum, *alæ et carina* dipetala vexillo multò breviores. *Stamina* diadelpha recta, decimo nunc cæteris subcoalito, nunc libero alis multò breviore aut rariùs deficiente. *Legumen* longum torulosum bivalve polyspermum. *Semina* ovata, hilo laterali.—Arbusculæ *aut* frutices, *rarius* herbæ. Stipulæ *parvæ à petiolo distinctæ.* Folia *petiolata* 1-*juga cum impari; foliolis loco stipellarum glandulis basi stipatis.* Caules *et* petioli *interdùm aculeati.* Racemi *elongati, pedicellis sæpè ternatim approximatis.* Flores *rubro-coccinei.* Semina sæpiùs rubro et *nigro mixta, nitida.* DC. loc. cit. p. 410—411.

E. *laurifolia,* caule suffruticoso ramoso; ramis gracilibus glabris subaculeatis, foliis ternatis: foliolis petiolatis oblongis acuminatis, petiolis subaculeatis glandulosis, calycibus unidentatis, carina monopetala, staminibus monadelphis.

Erythrina laurifolia. *Jacq. obs.* 3. 1. *t.* 51.

Erythrina Crista galli. *Botan. regist.* 313. *excl. synonym.*

Stem suffruticose, when cultivated in the open ground becoming herbaceous: *branches* upright, long, and slender, round, smooth, furnished here and there with a few

hooked prickles. *Leaves* with long slender petioles, ternate: *leaflets* petiolate, oblong, acuminate or tapering to a slender point, entire, smooth, the ribs sometimes prickly, and sometimes destitute of prickles. *Petioles* nearly cylindrical, or slightly flattened on the upper side, with 1 hooked prickle just below the leaflets, much swollen, or gibbous at the base; *partial footstalks* short, furrowed on the upper side, terminal one producing 2 glands at the base, lateral ones producing 1 each. *Flowers* terminating the branches in a long raceme, generally in threes; lower part of the raceme leafy, the upper part without leaves. *Peduncles* cylindrical, of a glossy purple. *Calyx* campanulate, 1-toothed, smooth and glossy, of a brown colour, the margin membranaceous. *Corolla* of a rich but dull crimson: *vexillum* very broad, roundly oval, obtuse, at first folded inwards, afterwards flat and reflexed, streaked with numerous darker lines: *wings* very short and greenish, oblong, bluntish, with an obsolete lobe on each side, a little above the base: *keel* nearly as long as the vexillum, also striped, and folded in so as to enclose the filaments, the anthers protruded. *Stamens* 10, all connected, the upper one separate about half its length, the others connected nearly to the point. *Germen* downy, terminated by a purple ascending *Style*, and small slightly capitate *Stigma*.

When we published the present plant, we mentioned it as our opinion that two species were confused under E. *crista galli*, which proves to be correct, as we saw them both in flower last Autumn, and we intend shortly to publish the other species, the one figured in Smith's Exotic Botany, t. 95.

This very grand species had always been considered as a hothouse plant, until Mr. Milne, of the Fulham Nursery, had the curiosity to try one out in the open ground; he accordingly planted one deep in the earth in a warm border, by the side of a wall in his garden, in the Summer of 1823, where it has remained ever since without the least protection, and has now established itself well in the ground, the shoots dying down annually, like a herbaceous plant, and the next Summer producing fresh ones, which are stronger every season, and each produce a long compact raceme of flowers; at the time our drawing was

made, the latter end of September last, there were three bunches of flowers, such as the one in our figure; the flowers are produced much closer together, and the colour is darker and richer than on plants that are grown within doors, in which the racemes are lengthened out, by being drawn up under glass; it will certainly be one of the greatest ornaments for a warm border of the flower garden, and will succeed in any rich light soil; young cuttings, planted in Spring, in pots of sand, and plunged under a close hand-glass, strike root readily; but they must be potted off as soon as rooted, or they will be apt to damp; when first potted off, they must be still kept close under a hand-glass or frame, until they have made fresh root in the mould, when they must be hardened to the air by degrees; the best time for turning the plants in the open ground, is about the middle of May, or from that time till the middle of June, as the plants will then get established before Winter.

We have some doubts whether there are not two species confused under E. *crista galli*, as it is described by most authors as arborescent, whereas our plant has always an inclination to die back after flowering, even when grown in the hothouse, which is not the case with any other species with which we are acquainted, except E. *herbacea*, a species which may be grown in the borders in the same manner as recommended for the present species, and which is also very handsome.

This plant belongs to the Natural Order LEGUMINOSÆ, an order which has lately been the subject of particular attention by M. Decandolle, in the second volume of his excellent Prodromus, and also in the Mémoires sur la famille des Légumineuses, where several new Genera are delineated, and young plants of numerous others, to show their different modes of germination, a plan which we have no doubt will in time be pretty generally adopted for fixing characters, particularly in difficult orders. Mr. Lindley hath noticed M. Decandolle's work in the last number of the Botanical Register, but he seems not to have noticed that the plant he was describing was already described there, and had been published long since in the Botanical Magazine, v. 47, p. 2169, under the name of *Kennedia ovata*, by which name it is now generally known in the London Nurseries.

LEGUMINOSÆ is divided by M. Decandolle into 4 Suborders, *PAPILIONACEÆ*, *SWARTZIEÆ*, *MIMOSEÆ*, and *CÆSALPINEÆ*. PAPILIONACEÆ contains the following tribes, *Sophoreæ*, *Loteæ*, *Hedysareæ*, *Vicieæ*, *Phaseoleæ*, and *Dalbergieæ*. SWARTZIEÆ and MIMOSEÆ each contains but one tribe; and CÆSALPINEÆ three, *Geoffreæ*, *Cassieæ*, and *Detarieæ*; the whole of which contains 282 genera, besides many doubtful species, some of which will hereafter form other genera, when their fructification has been properly examined.

On the first of last month was published the first Number of a work conducted by Mr. J. C. Loudon, entitled the Gardener's Magazine, a work that will become both useful and interesting, if well got up. Under *Garden Botany*, at p. 61 of the said Magazine, is an attack upon our Flower Garden, in which it says that the "plates bear no sort of comparison with the neatness and accuracy we are accustomed to expect in works of this nature." The writer of this *Garden Botany* is Mr. Lindley, one of the Clerks belonging to the Horticultural Society's Garden, who also at present writes for the Botanical Register, and sometimes embellishes it with what he may call figures of plants? of his own drawing, such as *Rubus pauciflorus*, pl. 854, the panicles of which he describes as being without prickles, which he says distinguishes it from another species; but his figure represents the panicles prickly; he also describes the leaflets sessile, but they are all represented with footstalks; if that is the sort of accuracy he wishes us to adopt, I believe our Subscribers would much rather that we omit it. It is very plain that he had not examined the works of which he was speaking, as he says there are six volumes of the Geraniaceæ published, although the third is not yet finished; also two volumes of the British Flower Garden, though this number only makes one and a half. As for the correctness of the Figures, we can speak with confidence, as we examine them all by the plants, and by our descriptions, before they go to the engraver, and then again before they are coloured; and we are quite certain that there is no Botanical work of the kind better or more carefully coloured than this is; we pay more than other works for colouring, on purpose to have the best colours used. But Mr. L. intends all this, we believe, against our artist, who at one time made many drawings for the Society, until Mr. L. became jealous of him, and was ashamed of his own figures: this now shows itself plainly, as he says the figures by Mr. Clark, in the Flora Conspicua, are real specimens of art; and we believe that most people will agree with us that they are the worst that are at present published; but Mr. C. now draws for the Society, and Mr. Smith's drawings are shown him as specimens to go by.

1. Calyx. 2. Vexillum. 3. The 2 short alæ, or wings. 4. Keel. 5. The 9 Stamens, with the filaments all connected at the base, and distinct at the points. 6. The distinct filament, which is sometimes also slightly connected at the base. 7. Germen, showing its downy surface, terminated by an ascending Style, and small capitate Stigma.

Pub. by R Ferguson. Feb 1826

LAPEYROUSIA anceps.

Flat-stemmed Lapeyrousia.

Natural Order. IRIDEÆ. *Brown prodr. p.* 302.

LAPEYROUSIA. Perianthium corollaceum; tubo gracili; limbo regulari, 6-partito, hypocrateriforme. *Stigmata* 3, gracilis, 2-partita, patentia. *Capsula* membranacea, 3-locularis, polysperma.

L. *anceps*, scapo folioso subtriquetro-ancipiti ramoso: angulis denticulatis, foliis ensiformibus nervosis margine crispis, spathis foliaceis crispo-dentatis, laciniis limbi spathulatis concavis.

Lapeyrousia anceps. *Ker. Ann. bot.* 1. *p.* 238. *Botan. magaz.* 1246. *in Spec. enum.*

Lapeyrousia compressa. *Pourret. act. tolos.* 3. *p.* 39. *t.* 6.

Gladiolus anceps. *Vahl. enum.* 2. *p.* 108. *Willd. spec.* 1. *p.* 216. *Thunb. glad. p.* 17. *c. ic. Jacq. coll.* 4. *p.* 163. *Ic. rar.* 2. *t.* 269. *Rœm. et Schult. syst.* 1. *p.* 433.

Ovieda anceps. *Spreng. syst. veg.* 1. *p.* 147.

Bulb small, about the size of a large Marrowfat pea, clothed with a hard glossy brown shell. *Stem* about a span high, branched, flat; the main stem 3-edged, side ones flat and 2-edged; all the edges toothed with numerous small teeth, not unlike a file or rasp. *Leaves* broadly ensiform, many nerved, short and blunt, the edges more or less curled, and sometimes toothed, rather glaucous, or of a light green colour; upper ones, or spathes, very short, sheathing the stem; inside of the outer valve is a membranaceous sheath with two leafy toothed edges, terminated in a bifid point, and enclosing the bottom of the tube. *Perianthium* corollaceum, with a long slender tube of a bluish purple; the limb hypocrateriform, divided into 6 segments, which are spathulately lanceolate, the points slightly curved inwards; two upper ones rather the largest, of a dark blue, light at the sides near the base, the others narrower, keeled at the back, and the white sides near the base larger and stronger. *Stamens* 3, distinct, inserted in the upper part

of the tube: *filaments* smooth, attached to the back of the anthers: *anthers* sagittate. *Style* smooth, long and slender, exserted. *Stigmas* 3, of a blue purple, each 2 parted and fimbriate, the points curling or twisted irregularly. *Germen* 3-sided, 6-furrowed, smooth.

This very pretty plant, which we believe is now for the first time introduced to our gardens, is one of the Cape bulbs that was brought from the Cape by Mr. Synnet; several other species of this genus are in Mr. Colvill's collection, and some of them quite new, and not described; we believe more species of new and interesting bulbs have been brought home by him, than ever was brought at one time before, by any person; amongst them we have four new species of *Ferraria!* and we have already flowered five species of *Homeria*, four of which are new.

The present plant will succeed well by the same method as recommended for the cultivation of *Geissorhiza vaginata*, in our last Number, t. 138, to be planted out the latter end of March, or beginning of April, in a bed raised a little in the centre and gradually falling to each side, that the moisture may pass off, without injuring the bulbs; the soil to be as sandy and light as possible; and as the present plant is of low growth, it should be planted in one of the front rows, and not above 3 inches deep, as the bulb is small, and would be liable to rot if planted too deep; as soon as it has done flowering, and the stalks are decayed, it may be taken up and kept in a dry place, where no frost can get at it, till the following Spring, when the bed must be made up afresh, and some fresh mould and sand must be added. If left in the ground all the Winter, it will require covering in sharp frost, or very wet weather; and if grown in pots in frames or in the greenhouse, a mixture of loam, peat, and sand, is the best soil for it. Seeds ripen freely, if some pollen be brushed on the stigmas when in bloom.

1. Sheath that encloses the base of the tube. 2. Perianthium spread open, divested of the Stamens. 3. The same divested of the segments, showing the insertion of the stamens, the anthers sagittate at the base, and attached by their back to the filaments. 4. Germen, terminated by the Style and three bifid Stigmas, slightly fringed.

E D Smith Del. Pub. by R Sweet Feb 1826. Wed. Lith.

ASCLEPIAS verticillata.

Whorl-leaved Swallow-wort.

Natural Order. ASCLEPIADEÆ. *Brown prodr.* 1. *p.* 458.
ASCLEPIAS. Massæ Pollinis læves, 10, pendulæ. *Corona staminea* simplex, 5-phylla: foliolis cucullatis, e fundo exserentibus processum aversum corniformem. *Corolla* reflexa. *Folliculi* læves. *Brown Hort. Kew. ed.* 2. *v.* 2. *p.* 80.

A. *verticillata,* caule erecto subramoso lineatim puberulo, foliis verticillatis linearibus margine revolutis adultis glabris, umbellis multifloris, corniculis falcatis exsertis.
Asclepias verticillata. *Willden. sp. pl.* 1. *p.* 1272. *Mich. fl. amer.* 1. *p.* 116. *Pursh. fl. amer. sept.* 1. *p.* 183. *Nuttall gen. amer.* 1. *p.* 168. *Pers. syn.* 1. *p.* 277.
Apocynum marianum erectum, linariæ angustissimis foliis, umbellatum. *Pluk. mant.* 17. *t.* 336. *f.* 3.

Perennial. Stems several from the same root, erect, from 18 inches to 2 feet high, not much branched, slightly angular, and furrowed, and clothed with lines of white villous pubescence, between which it is smooth. *Leaves* in whorls round the stem, with very short footstalks, about 2 inches long, narrowly linear, acute, with revolute margins, straight, or sometimes twisted or revolute, pubescent while young, but becoming smooth and glossy by age, rugged and of a dark green on the upper side, underneath lighter and with a strong midrib. *Petioles* very short, pubescent. *Umbels* many-flowered, axillary, alternate with the leaves, or in whorls round the stem. *Peduncles* slender, pubescent. *Involucre* of several subulate, fringed bractes. *Pedicles* slender, densely pubescent. *Calyx* deeply 5-parted; segments lanceolate, acute, pubescent, close pressed to the corolla. *Corolla* 5-parted, segments ovate, concave, bluntish, points ascending, of a greenish white tinged

with purple at the back, and alternate with the segments of the calyx. *Leaflets of the Stamineous crown* spreading, cucullate, with a sharp tooth on each side, white, from the base inside proceeds a sharp falcate horn, which is exserted beyond the mouth, and bends inwards. *Stamens* 5, close-pressed to the germen. *Pollen masses* 10, smooth. *Styles* 2, very short, crowned with a flat pentagonal *Stigma*.

This delightfully fragrant plant is a native of North America, and has been introduced to our collections ever since the year 1759, but is still very rare in them, owing, we believe, to its best mode of cultivation not being sufficiently well known. Our drawing was taken from strong specimens, kindly given to us by Robert Barclay, Esq. of Bury Hill, in September last, where it was thriving luxuriantly in the open borders, in peat soil; that, or very sandy loam, being the only soil in which it will succeed well; as it produces its flowers so late in the season, it will seldom ripen its seeds with us, except the Autumn be very mild. The plants should be planted a good depth in the soil, as the frosts, if severe, will be liable to injure the young buds, that are to produce the flowering stems for the following season. Pursh, in his Flora of North American plants, mentions it as a native of dry hills and fields, from New Jersey to Carolina, flowering in June and July; with us it should be planted in a warm border, and in a dryish situation, and should be seldom moved, as it would require some time to establish itself again; it seldom exceeds 2 feet in height, and is oftentimes considerably less; it may be occasionally increased by dividing the root, or by seeds when they can be procured,

1. Calyx. 2. The 5-cleft Corolla divested of the Stamineous crown, and also of the Germen and Stamens. 3. The Stamineous crown, showing its 5 cucullate leaflets with incurved points. 4. One of the leaflets spread open, to show the tooth on each side. 5. The 5 Stamens attached to the Styles, which show below them.

E.D. Smith Del. Pub. by R. Sweet, March 1826. Weddell Sc.

LUCULIA gratissima.

Delightfully fragrant Luculia.

Natural Order. RUBIACEÆ. *Juss. gen.* 196.
Sect. IV. *GARDENIEÆ.* Bacca bilocularis; loculis polyspermis.

LUCULIA. Calyx 5-sepalus; sepalis subæqualibus deciduus. *Corolla* infundibuliformis, tubo longo vix suprà dilatato, limbo plano 5-partito. *Antheræ* oblongæ intrà tubum subsessiles semiexsertæ. *Stigmata* 2, carnosa. *Ovarium* oblongum carnosum, apice coronatum, 2-loculare; loculis polyspermis. *Bacca?* 2-locularis. *Dissepimentum* parallelum. *Semina* minuta, dense imbricata, apice breve membranacea.

L. *gratissima*, foliis ellipticis acuminatis multinerviis supra glabris subtus nervisque villosis, sepalis linearibus obtusiusculis, tubo corollæ limbo duplo longiore.
Luculia gratissima. *Swt. hort. brit. p.* 197.
Cinchona gratissima. *Wallich in Flor. Ind. vol.* 2. *p.* 154.
Mussænda Luculia. *Hamilton Mss. D. Don Prodr. Flor. Nepalens. p.* 189.
Luculi Swa. *Nawaricè.* Lechoni Swa. *Parbuticè ex Don. l. cit.*

A small tree in Nepaul, according to Wallich; our specimen was from a shrub 9 feet high; *branches* opposite, dotted, slightly pubescent. *Leaves* opposite, spreading, the largest in our plant, about 8 inches long, and nearly 4 broad in the widest part, tapering at both ends, and ending in a taper point, the upper side smooth, of a bright green; underneath of a lighter colour, strongly nerved with numerous parallel oblique nerves, and reticulately veined, the nerves densely clothed with short villous down, and a little bunch of down in the axils of each. *Petioles* short and stout, slightly pubescent. *Stipules* deciduous, clasping the stem, lanceolately linear, and terminated in a long channelled taper point. *Cyme* terminal, with opposite branches, densely clothed with a soft white villous pubescence. *Bractes* opposite, under each division, and at the base of the pedicles, linear, taper-pointed, deciduous, the greatest part of them dropping before the flowers are overblown. *Pedicles* short, very downy, the middle ones much the shortest. *Flowers* large and showy, of a beautiful pink, or light rose-colour, generally in threes, delightfully fragrant. *Calyx* of 5 sepals, which are linear, bluntish, of a pale red below, with green tips, slightly pubescent on the outside,

seated on a short crown which terminates the Ovarium, deciduous, and dropping off soon after the expansion of the flowers. *Corolla* funnel-form, with a slender, angular, slightly furrowed, smooth tube, about double the length of the limb, and twice the length of the calyx, very little widening at the throat, which is naked or free from pubescence: *limb* spreading, deeply divided into 5 lobes, which are imbricate at the base, the points rounded and slightly crenulate. *Stamens* 5, inserted in the throat; *filaments* very short and slender; *anthers* erect, in our specimens reaching a little above the mouth of the tube, or half exserted: *pollen* straw-coloured. *Style* smooth, red, rather more than half the length of the tube. *Stigmas* 2, thick and fleshy, oblong or spatulate, spreading at the points, not reaching the anthers. *Ovarium* slightly top-shaped, fleshy, clothed with a villous down, two celled. *Ovula* small, very numerous, densely imbricate.

Our drawing of this very grand and delightfully fragrant flowering plant, was made from a fine specimen kindly sent to us by favour of the Countess of Bridgewater, from her Ladyship's collection at Ashridge, where it was flowering in the Conservatory; and we are informed by her Ladyship's Flower Gardener, Mr. Poynter, that it has continued to bloom from October to the end of January; we never recollect having met with any flower of a more agreeable perfume, which still remains in our dried specimen; there can be no doubt but it will stand our Winters very well, if planted by the side of a south wall, and to be covered with mats in severe frost, where it will form one of the greatest ornaments of our gardens. It thrives well in a mixture of turfy loam and peat, and cuttings taken off at a joint, will, without doubt, root readily, if planted in pots of sand, and placed under a hand-glass. Dr. Wallich mentions it as growing on exposed hills in the valley of Nepaul, and Silhet, blossoming, according to the situation in which it is found, all the year round. It certainly has nothing to do with Cinchona, in which genus it has been placed by Dr. Wallich, but is nearly related to Mussænda, and might be placed in that genus, as it is at present constructed, but it cannot remain there as a true congener; it was raised from Nepaul seed at Ashridge, about the year 1816.

1. The young villous fruit, terminated by the 5 sepals. 2. Tube of the Corolla spread open, to show the insertion of the 5 Stamens. 3. Germen, showing its crown from which the sepals are dropt, terminated by the Style and 2 fleshy Stigmas. 4. Germen cut across, showing the partitions. 5. The same spread open, to show the 2 valves, one of them opened to show the small imbricated seeds.

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F.D. Smith Del. Pub. by R. Sweet [illegible] Weddell sc.

RUDBECKIA pinnata.

Fragrant pinnated Rudbeckia.

Natural Order. COMPOSITÆ. *Adanson fam.* 2. 103.
Sect. V. *HELIANTHEÆ. Kunth synops.* 2. *p.* 463.
RUDBECKIA. Involucrum polyphyllum; foliolis simplici aut duplici serie dispositis, patentibus. *Receptaculum* conicum aut convexum, paleaceum. *Flosculi* disci tubulosi, hermaphroditi; radii ligulati, neutri. *Akenia* compresso-quadrangularia, apice marginata, subquadridentata, aut calva.—Herbæ *sæpe hispido-scabræ.* Folia *alterna, rarius opposita, integra, laciniata, ternata aut pinnato-incisa.* Flores *terminales, solitarii.* Radius *flavus, croceus aut purpureus;* discus *sæpissime fusco-violaceus.* Kunth synops. 2. p. 486, 487.

R. *pinnata,* caule sulcato hispido-pubescente, foliis radicalibus pinnatis; caulinis lobatis ternatisque: summis indivisis: foliolis lanceolatis acutis subserratis, receptaculo elongato, pappo integerrimo.

Rudbeckia pinnata. *Vent. cels. p. et t.* 71. *Smith exot. bot.* 1. *p.* 73. *t.* 38. *Pers. syn.* 2. *p.* 476. *Schrad. neu. journ.* 2. *p.*61. *Willd. enum.*2. *p.*921. *Mich. fl. amer.* 2. *p.*144. *Pursh fl. amer. sept.* 2. *p.*576. *Hort. Kew. ed.* 2. *v.* 5. *p.*130.

Perennial. Stems several from the same root, erect, 4 or 5 feet high, branching, angular, and furrowed with numerous channels, thickly clothed with a short hispid pubescence. *Leaves* variable: *lower ones* large and pinnate, the leaflets broadly lanceolate, acute, more or less serrate, oblique at the base, strongly 2 or 3-nerved underneath, the nerves branching, rough, and thickly clothed with short hairs on both sides, the lower ones bifid, or 2-lobed: *stem leaves* pinnatifid, deeply lobed, ternate or trifid, the upper ones simple, lanceolate, acute, 3-nerved and entire: segments and leaflets on the stem leaves narrower and less serrate. *Petioles* channelled on the upper side, and bluntly keeled on the lower, furrowed, and thickly clothed with short hispid hairs,

clasping the stem at the base. *Flowers* numerous, terminating the branches in a sort of panicle. *Peduncles* stiff and erect, angular and channelled, hispidly pubescent, 1-flowered. *Involucre* of a double series of leaflets, which are spreading, lanceolate, acute, the points ascending. *Receptacle* elongated, conical, chaffy: *chaff* inclosing the seed, keeled, pubescent, with purple margins, and a tufted villous head. *Rays* large, yellow, broadly ligulate, 2 or 3 toothed at the point, strongly nerved, barren, without the rudiments of a pistil, at first spreading, afterwards elegantly dependent, the points more or less revolute. *Florets of the disk* numerous, dark purple, tubular, 5-toothed, the veins prominent and alternating with the teeth. *Anthers* 5, connected into a tube, each with 2 short teeth at the base; *pollen* orange-coloured. *Style* short, smooth. *Stigma* 2-cleft, the segments purple, fimbriate, and spreading. *Seeds* flattish, with winged margins, terminated with an obsolete entire pappus.

Our drawing of this plant was taken from some fine flowering specimens obligingly given to us by Robert Barclay, Esq. of Bury Hill, when we had the pleasure of visiting his valuable and rare collection last Autumn; the plant from which the specimens were taken, was about 5 feet high, and entirely covered with its fragrant flowers, which made a fine appearance; it is certainly one amongst the finest of the strong-growing plants that flower in Autumn, and succeeds well in the common garden soil, where the situation is not too moist, and may be increased by dividing at the root, or by seeds, which sometimes ripen. Pursh mentions it as growing in the western parts of Carolina and Georgia, flowering from July to October.

1. The Involucre, showing the double row of leaflets. 2. The elongated Receptacle, showing the chaff with which it is clothed. 3. One of the Rays. 4. One of the Florets of the disk. 5. The 5 Stamens spread open, to show the connected anthers and distinct filaments. 6. One of the Anthers detached, to show the 2 teeth at the base. 7. Seed terminated by the Style, and the two-cleft fringed Stigma. 8. One of the scales of the chaff, showing its keeled back, and villous point.

E.D.Smith Del. Pub. by R. Sweet. March 1826. Waddell

DODARTIA orientalis.

Oriental Dodartia.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 1. *p.* 438. Sect. II. Stamina 4 antherifera.

DODARTIA. Calyx campanulatus brevis, angulatus, 5-dentatus. *Corolla* tubulosa, limbo 2-labiato, supra emarginato, infrà latiore et longiore 3-fido. *Stigma* bifidum. *Capsula* globosa calyce tecta.—Radix *repens; caulis basi lignosus; folia rara, parva, distantia, inferiora opposita, superiora alterna; ramuli axillares, flores laxé spicati terminales bracteati.* Juss. gen. p. 119.

D. *orientalis*, caule ramoso glabro subnudo, foliis linearibus, inferioribus serratis superioribus integerrimis glabris.

Dodartia orientalis. *Willden. sp. pl.* 3. *p.* 355. *Pers. syn.* 2. *p.* 164. *Mill. ic.* 1. *p.* 85. *t.* 127. *Lam. ill. t.* 530. *Hort. Kew. ed.* 2. *v.* 4. *p.* 52.

Roots perennial, creeping. *Stems* numerous, from a foot to 15 inches in height, very much branched, smooth and glossy, rush-like, resembling *Spartium scoparium*, alternately flattened, from one joint to the next, or obsoletely and bluntly 4-sided: branches spreading, nearly naked, the leaves being small and very distant. *Leaves* sessile, linear, smooth, the margins of the lower ones distantly toothed, and rather uneven: upper ones short, distant, acute, entire. *Flowers* in a terminal raceme or spike, of a dark purple, with one bracte at the base of each. *Bractes* lanceolate, acute, nearly the length of the calyx. *Pedicles* very short, or altogether wanting. *Calyx* short, bell-shaped, 5-toothed, many angled, the teeth erect, or slightly spreading, sharp-pointed. *Corolla* tubular, two-lipped, upper one shortest, straight, emarginate: lower one broader and longer, 3-fid or 3-lobed, side lobes broad and rounded, middle one nar-

rower. *Stamens* 4, inserted in the tube, 2 lower ones longest: *filaments* smooth: *anthers* 2-lobed. *Germen* nearly globular, smooth. *Style* smooth, bright purple. *Stigma* 2-cleft, the segments spreading.

The present subject is an old inhabitant of our gardens, having been introduced to them as long ago as 1752, but it still continues very scarce, most likely from being generally planted in situations that are too much exposed, for being a native of the Levant, makes it rather tender, and therefore requires a sheltered situation. At the Nursery of Mr. Lee, at Hammersmith, where our drawing was made in August last, the plants had quite established themselves, and were growing very luxuriantly by the side of a wall, on a south border in the common garden soil. It is certainly deserving a place in every collection, from its singularity of appearance, and the colour and form of the flowers, which are so different from all others; when once established, it increases freely by its creeping roots. It also occasionally ripens seeds, which should be sown as soon as ripened, and should then be protected in a Greenhouse or Frame, during the Winter.

1. Calyx. 2. Corolla spread open, to show the insertion of the Stamens. 3. Germen, terminated by the Style and 2-cleft Stigma.

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E.D. Smith Del.
Pub. by R. Sweet. March, 1826.

FERRARIA obtusifolia.

Blunt leaved Ferraria.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.
FERRARIA. Spatha diphylla. *Perianthium* 6-partitum petaloideum; laciniis undulato-crispis interioribus minoribus. *Stamina* 3; filamenta in tubum coalita, apice patentia; *antheræ* bilobæ. *Stigmata* 3, penicilliformia. *Capsula* 3-locularis, infera. —Radix *tuberoso, glabro.* Herbæ *caulescentes, erectæ, subramosæ.* Folia *ensiformia aut subsubulata, glaucescentia, rigida.* Flores *spathacei.*

F. *obtusifolia,* caule erecto ramosissimo multifloro, foliis distichis ensiformibus obtusis glaucis utrinque carinatis, lobis antheræ approximatis.

Root tuberous, smooth, not unlike a Potatoe. *Stem* erect, smooth but glaucous, cylindrical, about 18 inches in height, very much branched; the branches again branching and crowded. *Sheaths* at the base spotted with small irregular spots of a brownish purple. *Leaves* distichous, sheathing the stem at the base, ensiform, obtuse, but terminated with a small point in the middle, (not on one side as in some species,) sharply keeled from the base to the point on both sides, and covered with a glaucous gloss, which easily rubs off: the *leaves* on the middle of the stem are longest, as long as the stem, upper ones becoming gradually shorter. *Flowers* numerous, the spathes crowding each other. *Spathe* 2-valved, ventricose, scarcely acute, striate with numerous small lines, the margins membranaceous: upper one double the length of the other: another membranaceous spathe encloses the flower before expansion. *Peduncle* slender, slightly triangular, enclosed in the spathe, about 2 inches long. *Perianthium* deeply divided into 6 petal-like segments, the 3 outer ones nearly double the size of the others, reflexed from about the middle, the bases forming a sort of bowl, below the bend striped with white and purple, above the bend about half way to the point, of

a rich velvet colour, in the middle of which, on the smaller segments, is a small white spot, the edges and points elegantly curled, of a yellowish brown colour. *Stamens* 3: *filaments* spotted, joined in a tube at the base, the points spreading: *anthers large*, 2-lobed, joined by their back to the filaments: lobes open at the base, but approaching each other, (not divergently spreading as in another new species,) *pollen* orange-coloured. *Germen* smooth, acutely 3-sided. *Style* smooth, about the length of the stamens. *Stigmas* 3, each bifid, and divided into numerous bristle-like segments, like a pencil, brown at the base, the points yellow.

This beautiful and very distinct species is one of those already mentioned by us, as having been introduced from the Cape, by Mr. Synnet, and flowering in the collection of Mr. Colvill, where our drawing was made last Autumn; we believe it to be the most beautiful of the genus, and produces by far the greatest number of flowers, which, in our plant, continued to open in succession, for nearly two months; we are fearful that only one plant of this species is in the collection, no other one of the sort having as yet appeared, and by flowering so late in the season, it did not ripen any seeds, so that it is likely to be scarce for some time: as this bulb, or rather tuber, is large, and not unlike a potatoe, it will require to be planted deep in the ground, full 6 inches: to be planted out the end of March, or beginning of April, in a bed composed of a light sandy soil, such as is used for Tulips, or other choice bulbous roots, by the Florists: after flowering, and when the stems are beginning to decay, the root should be taken up and laid to dry, out of the reach of frost, till the following Spring, as it would not be safe to let it remain in the ground all the Winter, except it was well covered, and growing in a warm sheltered situation.

1. One of the outer segments of the Perianthium. 2. One of the inner segments. 3. The 3 Filaments joined in a tube with spreading points, each terminated by an anther, with 2 straight lobes. 4. Germen terminated by the Style and 3 bifid Stigmas, which are very much fringed or pencil-formed, with 2 membranaceous bractes enclosing the peduncle at the base.

E.D.Smith Del. Pub. by R. Sweet April 1826. Weddell Sc.

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LYTHRUM diffusum.

Spreading Loose-strife.

Natural Order. SALICARIÆ. *Juss. gen.* 330.

LYTHRUM. Calyx tubulosus, 12-striatus, limbo 12-dentatus: dentibus sex exterioribus angustioribus vel brevioribus, persistens. *Petala* sex, limbo calycis inter ejus dentes interiores inserta, æqualia, patentissima. *Stamina* duodecim, interdum sex vel pauciora, tubo calycis inserta, inæqualia, exserta. *Antheræ* biloculares, dorso affixæ, longitudinaliter interne dehiscentes. *Ovarium* superum, sessile, glandulæ hypogynæ orbiculatæ carnosæ insertum (semper?), biloculare. *Ovula* creberrima, placentæ centrali affixa. *Stylus* 1, exsertus, (v. inclusus, *Nob.*) *Stigma* capitatum. *Capsula* membranacea, calyce persistente vestita, bilocularis, loculicido-bivalvis. *Semina* crebra, hinc convexa, inde plana, aptera. *Integumentum* exterius tenue, membranaceum; interius subcoriaceum, superficie interna carnosa. *Endospermium* nullum. *Embryo* rectus. *Cotyledones* plano-convexæ. *Radicula* centripeta.—Herbæ *aut* frutices. Folia *alterna, opposita vel verticillata, integerrima.* Flores *axillares, solitarii, vel plures pedunculo communi brevi insidentes, spicati, purpurei, rarius albi. Variant numero dentium calycis et petalorum.* Kunth synops. 3. p. 452—453.

L. *diffusum*, caule alato ramosissimo basi suffruticoso; ramis diffusis subpubescentibus tetragono-alatis, foliis oppositis subsessilibus oblongo-lanceolatis acutiusculis glabris basi rotundatis margine subciliatis, pedunculis 3-4 nis axillaribus 1-floris, floribus verticillatis dodecandris, stylo incluso.

Lythrum diffusum. *Swt. hort. brit. p.* 150.

Lythrum virgatum. *Pursh fl. amer. sept.* 1. *p.* 334. *nec aliorum.*

Root perennial. *Stem* suffruticose at the base, very much branched, winged: *branches* spreading in all directions, acutely 4-sided, furrowed, and conspicuously winged, slightly pubescent, ascending, or the upper part becoming erect. *Leaves* opposite, oblongly lanceolate, scarcely acute, broader and rounded at the base, nearly sessile, or with very short footstalks, smooth or scarcely pubescent, the margins slightly fringed, strongly veined on the lower side. *Petioles* very short and flat; some of the upper leaves alternate. *Flowers* axillary, in whorls round the stem, of a rosy purple, 3 or 4 in the

axil of each leaf, on the upper part of the stem, so as to form a sort of spike or raceme. *Bractes* at the base of the peduncles subulately linear, taper-pointed, deciduous, dropping generally before the flower. *Peduncles* short, pubescent. *Calyx* tubular, pubescent, furrowed, 12-striped, the limb 10 or 12 toothed, the outer teeth subulate and elongated, spreading: the alternate or inner ones short and ovate, acute, submembranaceous, the points bent inwards. *Petals* 5, 6, or 7, inserted in the mouth of the calyx, one betwixt each of the inner teeth, oblongly ligulate, scarcely acute, narrowed at the base. *Stamens* 10 to 12, unequal in length, inserted in the tube of the calyx, a little above the base, and all exserted: *filaments* slender, smooth and glossy, of a bright red, attached to the back of the anthers. *Germen* pyramidal, smooth and glossy, glandular or warted, 2-locular. *Style* short, smooth, recurved, included in the tube. *Stigma* capitate,

This very pretty plant is a native of North America, from which country it was imported by Mr. Miller, of the Bristol Nursery, about 4 years since, and from plants received from him our drawing and description was made; we have no doubt but it is the L. *virgatum* of the American Botanists, though very different from the European plant; we have never seen our present plant above a foot or 15 inches high, and very much branched and suffruticose at the base, with broadish leaves, which are scarcely acute; while, on the contrary, L. *virgatum* grows with us to the height of from 3 to 4 feet, with very few branches and narrow taper-pointed leaves, and certainly no two species had need to be more distinct.

The present subject succeeds well in the open borders in a rich light soil, and continues in bloom a great part of the Summer; it may be increased by dividing at the root, or young cuttings planted under hand-glasses will root readily, and will soon make nice young plants.

1. Calyx. 2. The same spread open, to show the insertion of the petals. 3. The 12 Stamens inserted in the calyx, a little above the base. 4. Germen, terminated by the short recurved Style and capitate Stigma.

F.D. Smith Del. Pub. by R. Sweet. April 1826. Weddell Sc.

SYNNETIA variegata.

Variegated-flowered Synnetia.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p* 302.

SYNNETIA. Spatha bivalvis, membranacea, lacera. *Perianthium* 6-partitum, corollaceum, longe tubulosum, subbilabiatum, ringens. *Stamina* 3, adscendentia, basi limbo inserta. *Stigmata* 3, apice dilatata, fimbriata, recurvo-patentia. *Capsula* oblongo-trigona. *Semina* globosa, nitida.

S. *variegata*, foliis ensiformibus acutis basi obliquis distichis, scapo subramoso foliis subæquantibus, spathis membranaceis laceris striatis; segmentis longe acutis, lacinia perianthii suprema elliptica erecta: 2 lateralibus oblongis apice recurvis: 3 inferioribus spathulatis concavis medio refractis.

Bulb-tuber about the size and shape of a smallish Walnut, clothed with a hard reticulately fibrous whitish shell. *Leaves* fan-shaped, flat, ensiform, oblique towards the base, acute, striated with numerous small lines, sheathing at the base, about the length of the scape: upper ones sometimes undulate or curled near the margins, of a pale green colour. *Scape* sometimes simple, and sometimes producing a branch or two, the lower part a little flattened, upper part nearly cylindrical, slightly glaucous. *Spathes* 2-valved, membranaceous, striate, much torn at the points, the segments long and taper-pointed. *Flowers* from 3 to 5 on each branch, sessile. *Perianthium* ringent, 2-lipped, with a long slender tube, the limb leaning forward: tube pale, tinged with purple: limb campanulate at the base, deeply 6-parted, and marked inside, below the segments, with 6 elegant dark blue stripes: upper segment elliptic, bluntish, erect or slightly twisted, of a beautiful dark blue, tinged with purple, two side ones oblong, blunt, slightly reflexed, of the same colour: 3 lower ones spathulate, narrow at the base, reflexed about the middle, where the sides fold inwards, and the points are

bent downwards, from near the point to the base is a large white, or sulphur-coloured mark, edged with dark blue, which makes an elegant appearance. *Stamens* 3, distinct, joined to the base of the limb: *filaments* smooth, nearly straight or slightly ascending, joined to the back of the anthers, which are linear and sagittate at the base: *pollen* purple. *Germen* oblong, 3-sided. *Style* long and slender, smooth. *Stigmas* 3, spreading, simple, the points widened and fimbriate, slightly recurved.

This very handsome and free flowering plant is another of the curious bulbs that we have already mentioned, as having been brought from the interior of the Cape, by Mr. W. Synnet, and is, we believe, quite new to Europe; we consider it, with the other irregular flowered species that have been referred to SPARAXIS, to form a distinct and natural genus, which we have named in compliment to the gentleman that has enriched our collections with so many rare and beautiful novelties; the genus is readily distinguished from SPARAXIS by its long slender tube and irregular limb, besides other distinctions; to it belongs S. *bicolor*, S. *galeata*, and some other unpublished species.

It is now a very proper season for planting out bulbs of this natural order, either in beds in the open ground, in borders by the side of a south wall, or in a pit made on purpose, and to be covered with lights in Winter; if planted in beds in the open garden, they must be composed of a light sandy soil, or a mixture of light turfy loam, peat, and sand, chopped up well and mixed together, will suit them very well, the beds being made to slope on each side, to carry off the moisture; if the bulbs are dry, they may be planted in the same manner as Tulips, but if growing in pots, the balls should be turned into the ground without breaking them. Our drawing was made at Mr. Colvill's Nursery, in September last.

1. The lacerated Spathes. 2. Perianthium spread open, to show the insertion of the 3 Stamens. 3. Germen, terminated by the Style and 3 slightly fimbriate Stigmas.

E D Smith Del.

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Weddell Sc.

TAGETES corymbosa.

Corymbus-flowered Tagetes.

Natural Order. COMPOSITÆ. *Adanson fam.* 2. 103.
Sect. IV. *JACOBEÆ. Kth. synops.* 2. *p.* 440.
TAGETES. Supra, fol. 141.

T. ***corymbosa,*** caule erecto angulato apice corymboso multifloro, foliis pinnatis: foliolis multijugis oppositis alternisque lanceolatis acutis basi inæqualibus angustatis argute serratis glanduloso-punctatis glabris: involucro oblongo-tubuloso quinquangulato, squamis pappi tribus: tertia duplo longiore subulata fimbriata.
α. ***purpurea.*** Supra.
β. ***lutea.***

Annual. ***Stem*** erect, 3 to 5 feet high, simple, or only branched on the upper part; many angled, the angles bluntly rounded, of a purple colour, smooth and glossy: ***branches*** short and slender, more sharply angled. ***Leaves*** large and spreading, alternate, pinnate: ***leaflets*** numerous, sometimes opposite, and sometimes alternate, lanceolate, acute, oblique, and attenuated at the base, sharply and deeply serrate, the lower teeth longest, smooth on both sides, but glandularly dotted, of a dark green, or tinged with purple on the upper side, and lighter underneath: on the rachis between the leaflets, are numerous subulate bristle like teeth, or small leaflets. ***Petioles*** channelled on the upper side and rounded on the lower, widened at the base, and clasping the stem. ***Flowers*** numerous, in a terminal corymbus, on longish peduncles, variegated with yellow and a brownish purple, in some plants altogether yellow: side branches generally terminated with 3 flowers. ***Peduncles*** 2 or 3 inches long, smooth, thickened upwards, and bluntly angular just below the involucre. ***Involucre*** oblongly tubular, slightly ventricose, bluntly 5-angular, 6 or 7-toothed, the teeth short and rounded, bearded, or densely ciliate, with fascicles of short gland like hairs. ***Receptacle*** convex, naked, dotted. ***Rays*** from 5 to 8, imbricate, broadly cuneate, truncate, yellow, the upper side stained nearly all over with a brownish purple, or sometimes altogether yellow, bearing a style and bifid stigma, and producing

perfect seeds. *Florets of the disk* numerous, tubular, 5-cleft; the segments tipped with purple and fringed. *Stamens* 5: *anthers* naked, connected into a tube, the *filaments* smooth and distinct. *Style* smooth, longer than the stamens. *Stigma* deeply 2-cleft, the segments spreading or reflexed, their points clubbed and fimbriate. *Seed* long, linear, clothed with a rough pubescence, and crowned with an unequal pappus of 3 paleaceous scales, which vary considerably on the different seeds, but one is double the length of the shortest, linearly subulate and fringed; another is unequal in length, the other is short and broad, truncate, and encloses the floret.

Our drawing of this new and beautiful species of Tagetes was taken from some fine plants at the Nursery of Mr. Colvill, in October last, where it had been raised from seed kindly presented to him by Mrs. Sutton, the Lady of the Archbishop of Canterbury, who had received them from Mexico, with many other curious seeds of rare plants, many of which are raised, and thriving well at Mr. Colvill's Nursery: the present species is certainly one of the handsomest, and we believe the most stately of the genus; the plants from which our drawing was made being between 3 and 4 feet high, quite upright, and only branching near the top, where they were terminated in a large corymb of flowers, a great many of which were in bloom at the same time; amongst them were two varieties, the present subject, and one with entirely yellow flowers, but no other difference that we could perceive; our seeds being sown so late in the season, we were obliged to remove some of the plants in the Greenhouse to ripen their seeds, where they have continued to bloom all the Winter, and will, without doubt, produce abundance of seeds this Spring; as it is a late bloomer, the seeds should be sown early in Spring, either in a south border, or in a Greenhouse or Hotbed, and when of sufficient size, they may be planted in the open borders.

1. The tubular Involucre. 2. The naked dotted Receptacle. 3. One of the Rays, showing the bifid Stigma, and the seed with the pappus of 3 nearly equal paleaceous scales. 4. Floret of the disk spread open, to show the fringed segments, and the 5 connected anthers and distinct filaments. 5. Style, terminated by a bifid clubbed Stigma, which is slightly fringed. 6. Seed, from a floret of the disk, terminated by 3 unequal scales.

R.D. Sweet Del.

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Weddell sc.

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HOMERIA miniata.

Spot-flowered Homeria.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.

HOMERIA. Perianthium 6-partitum, petaloideum; laciniis alternis minoribus: tubo brevissimo. *Stamina* 3: *filamenta* in tubum longum coalita. *Stigma* 3-fidum; laciniis bilobis aut bifidis, fimbriatis.—Herba *caulescentes:* caule *ramoso.* Folia *elongato-linearia, flaccida, basi vaginantia. Flores spathacei.*

H. *miniata,* foliis linearibus striatis glaucis flaccidis scapo geniculato ramoso longioribus, perianthii laciniis acutiusculis basi barbatis, filamentis villosulis.

Morœa miniata. *Andrews's reposit. t.* 404. *Swt. hort. sub. lond. p.* 11.

Homeria. *Ventenat. Decas nov. gen.* 5. *n.* 2. *Paris.* 1808.

Root a bulb-tuber, about the size of a hazel nut, conical or obturbinate, clothed with a hard shell, composed of fibres knitted together in a kind of net work. *Leaves* 3 or 4, grass-like, linear, glaucous, lined with numerous longitudinal lines at the back, upper side a little channelled, terminated in a long taper point, hanging loose and flaccid, longer than the scape. *Scape* leafy, branching, a little swoln and transparent at the joints, cylindrical: *flower-stems* slender, smooth. *Spatha* 2-valved, the inner one longest, acute, and terminated by a membranaceous point, 2 or 3-flowered. *Peduncles* smooth and glossy. *Germen* inferior, bluntly 3-angled, and furrowed on each side. *Perianthium* 6-parted, nearly to the base, rotate, the segments spreading flat, bearded at the base, three outer ones nearly double the size of the inner ones; elliptic or elliptically lanceolate, scarcely acute, of a bright copper colour, with a strong vein running down the centre, and a yellow spade shaped mark at the base, edged with brown, and spotted with several small black spots. *Stamens* 3: *filaments* connected all their length in a long cylindrical tube, very hairy on the lower part, and smooth upwards: *anthers* distinct, sagittate at the base, 2-celled, bursting in front to discharge the pollen, which is bright yellow. *Style* smooth, inclosed in the stamineous tube. *Stigma*

3-parted, surrounded by the anthers: the segments fimbriate, each 2-cleft.

Several bulbs of this pretty species were brought from the Cape last year by Mr. William Synnet, and have flowered at the Nursery of Mr. Colvill; it was introduced several years back by Mr. Niven, for the collection of George Hibbert, Esq. of Clapham, but we believe it was soon lost: it is certainly a very distinct species from H. *collina*, of which it has sometimes been considered as a variety; we consider the genus a very good and natural one, as has already been done by M. Ventenant, and Mr. Salisbury, certainly very different from MORÆA, and we think nearer related to SISYRINCHIUM: besides the present species, four other very different ones have flowered in Mr. Colvill's collection, which with *collina* and *elegans*, and some other species with which we are acquainted, will form not a small genus.

Like the other genera to which it is related, it may be grown with them in a bed made on purpose, as mentioned under *Synnetia variegata*, or it may be planted in a border by the side of a south wall, where it may remain all the Winter if covered in frosty weather with straw or fern, or any other covering that will keep the frost from the bulbs, but the soil must be light or sandy, and the bulbs may be planted from 4 to 6 inches deep, according to their size. All the Cape bulbs, if planted in beds in the open ground, will require to be taken up in Autumn, and to be kept dry and out of the reach of frost until the following Spring, except the ground in which they are, be particularly dry, and they will then require to be well covered in frosty weather. A very good plan is a brick pit, with lights, where all the sorts would succeed well; they would not require taking up in Winter, and would only need covering in wet or frosty weather.

1. Two of the segments of the Perianthium, to show their inequality and their bearded base. 2. The three Stamens, the filaments villous, united into a cylindrical tube, but spread open at the back, to show the front of the 3 distinct upright anthers, which are so close as to appear connected also, which is not the case. 3. The three-sided Germen, terminated by the smooth Style and 3-two-parted fimbriate Stigmas.

Pub. by R. Sweet. May 1826.

MALOPE trifida.

Large-flowered Malope.

Natural Order. MALVACEÆ. *DC. prodr.* 1. *p.* 429.
Div. I. *Calyx duplex seu involucro cinctus.*
MALOPE. Calyx cinctus involucro 3-phyllo, foliolis cordatis. *Carpella* plurima monosperma in capitulum adgregata.—Herbæ *floribus purpurascentibus aut albis.* DC. prodr. 1. p. 429.

M. trifida, foliis trinerviis trifidis trilobisve dentatis glabris; lobis acuminatis, stipulis oblongo-linearibus dentato-ciliatis, pedunculis axillaribus unifloris.
Malope trifida. *Willden. sp. pl.* 3. *p.* 799. *Pers. syn.* 2. *p.* 258. *DC. prodr.* 1. *p.* 429. *Cavan. diss.* 2. *p.* 85. *t.* 27. *f.* 2. *Swt. hort. brit. p.* 48.

Annual. Stem a foot to 18 inches high, branching: *branches* spreading, slightly angular and furrowed, a little blistered, glossy, slightly hairy. *Leaves* cordately ovate, entire, trifid, or slightly 3-lobed, some bluntish, the others more acute, the edges unequally notched with blunt roundish teeth, of a dull green colour, smooth on both sides, and dotted with innumerable minute dots: lobes taper-pointed. *Petioles* furrowed on the upper side, and rounded on the lower, thinly clothed with hairs, roughish or slightly blistered, tinged with purple. *Stipules* oblongly linear, taper-pointed, purple at the base, and fringed with very small teeth, terminated by longish rigid hairs. *Peduncle* axillary, solitary, one-flowered, slightly angular and furrowed, roughish, slightly hairy, sometimes tinged with purple. *Involucre* (or *outer calyx,*) of 3 leaflets, united at the base, broadly cordate, acute, much veined, the margins recurved near the base, and fringed with spreading white hairs. *Calyx* (or *inner calyx,*) deeply 6-parted: *segments* long, broadly lanceolate, keeled, the keels and margins fringed. *Petals* 5, unguiculate, the unguis bearded at the base on each side, limb broad, truncate, slightly crenulate, of a pur-

plish rose-colour, striped with several dark purple veins. *Stamens* numerous, arranged in a cylindrical monadelphous column: *filaments* distinct at the points, smooth, purplish: *column* dark blue at the bottom: *pollen* granular, of a brownish purple. *Styles* numerous, connected at the base, smooth. *Stigmas* purple, spreading. *Carpella* numerous, each 1-seeded, and collected into a close aggregate head, very much resembling a Raspberry.

This grand annual plant is a native of Barbary, and was introduced to our collections about the year 1808, but it still continues scarce, which we believe is owing to its not being sufficiently known; the specimens from which our drawing was made, was kindly sent to us last Autumn, by H. B. Ker, Esq. who raised them from seeds that he had obtained from France; we also saw strong specimens of it that had been grown in Mr. Lambert's garden at Boyton; it is certainly one of the most desirable plants that can be cultivated as an annual, as nothing can have a more splendid appearance than it has, when covered with its large glossy flowers; the best way of raising it, where there is such a convenience, is to sow the seeds in March, or the beginning of April, in a Greenhouse or Frames, and as soon as the plants are up, to transplant them, one or more in pots, where they may remain until they are 3 or 4 inches high, when they may be turned out with the ball entire into the borders of the flower garden, they will then flower earlier and ripen their seeds better than if sown in the open ground; but if sown at once in the open borders, about the middle of April is the best time, if the weather permits.

1. The 3-leaved Involucre or outer Calyx. 2. The true or inner Calyx. 3. The base of one of the Petals, to show its beard on each side. 4. The Column of Stamens, all united at the base, but the points of the filaments distinct and spreading. 5. The young head of seeds or Carpella, terminated by the connected Styles and spreading Stigmas.

E.D.Smith Del. Pub. by R. Sweet, May 1826. Weddell sc.

PATRINIA scabiosæfolia.

Scabious-leaved Patrinia.

Natural Order. VALERIANEÆ. *DC. fl. fr. ed.* 3. *v.* 4. *p.* 418.
PATRINIA. Calyx denticulatis superus bractea laterali suffultus persistens. *Corolla* regularis 5-loba. *Stamina* 4-5. *Capsula* 3-locularis, loculis 2 abortientibus. *Spreng. syst. veg. v.* 1. *p.* 365.

P. *scabiosæfolia*, foliis radicalibus oblongis acutis inciso-serratis lyratisque: caulinis pinnatifidis; lacinia terminali maxima, floribus corymboso-paniculatis.
Patrinia scabiosæfolia. *Fisch. Mss. Spreng. syst.* 1. *p.* 385.

A herbaceous perennial. *Stems* several from the same root, smooth, terminated with a panicled corymb of small yellow flowers, from a foot to 18 inches in height. *Leaves* at the root, oblongly or elliptically lanceolate, or ovate, acute, attenuated at the base and down the petiole, deeply cut or serrate, the teeth again serrated or toothed, underneath reticulately veined, the nerves thinly clothed with spreading hairs: the next leaves are lyrate or subpinnatifid, the terminal segment very large, elliptic or elliptically lanceolate, side ones unequal, spreading, the lower edge deeply serrate, upper one very slightly so: *stem-leaves* pinnatifid, segments lanceolate and acute, the terminal one much the largest, deeply and sharply serrate, side ones narrower, more or less toothed or entire. *Flowers* in a spreading panicled corymbus, continually forked. *Peduncles* furred with fascicles of short brown hairs. *Bractes* small, linear, smooth or very slightly pubescent. *Pedicles* very short, or scarcely any. *Calyx* denticulate, or toothed with very small teeth. *Corolla* of 1 petal, regularly 5-lobed, yellow. *Stamens* 4 or 5. *Style* 1, smooth. *Stigma* small, capitate.

This pretty herbaceous perennial is a native of Dahuria; the plant from which our drawing was made, was raised at the Nursery of Mr. Colvill, in the year 1823, from seed received from Dr. Fischer; it makes a very pretty appearance when covered with its numerous little yellow flowers, and succeeds well in the open ground, but prefers rather a dryish situation, as too much moisture rots its roots; it will also succeed very well in rockwork, or may be grown in pots, and can then be protected in a frame, if the weather prove very wet; the common garden soil suits it very well, and seeds ripen plentifully, so that it may be readily increased; those, if sown in pots, as soon as gathered, and the pots protected in a frame in Winter, will make flowering plants the next Autumn. Drawn at the Nursery of Mr. Colvill, in August last.

1. Calyx. 2. Corolla spread open, to show the insertion of the Stamens. 3. Style and capitate Stigma.

Errata. In various preceding numbers, for "Mr. Synnet," read "Mr. Synnot;" and at No. 38, fol. 150, line 1, 2, and 4, for "SYNNETIA," read "SYNNOTIA."

Lith. by B. Jowett May. 1826.

GLADIOLUS Colvillii.

Colvill's Corn-flag.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.

GLADIOLUS. Spatha 2-valvis, valvula exterior lanceolata, concava, integerrima. *Perianthium* basi tubulosum: limbus 6-partitus, irregularis, vel subregularis. *Stamina* 3, adscendentia; *antheræ* parallelæ. *Stigmata* 3, sursum dilatata, complicata, demum canaliculato-explicata. *Capsula* ovata, oblonga, subtrigona, lenta. *Semina* numerosa, alata.

G. *Colvillii*, foliis lineari-ensiformibus utrinque costatis glaucescentibus, tubo perianthii spatha subæquali, laciniis obtusis margine subinvolutis; tribus inferioribus macula alba lanceolato-ovata notatis.

Root a bulb-tuber. *Stem* slightly flexuose, in our specimen about 18 inches in height, leafy, slightly angular, glaucous. *Leaves* linearly ensiform, acute, sheathing the stem, slightly glaucous, strongly nerved in the middle on both sides, with 2 other less prominent longitudinal nerves, one on each side, one of which is much stronger than the other; at the base, where it sheaths the stem, furrowed with numerous channels, margins thick and smooth. *Flowers* secund, or all facing one side. *Spatha* 2-valved, lanceolate, acute, the margins scariose or membranaceous; inner one shortest. *Perianthium* tubular, ringent, with a 6-parted spreading limb, of a bright red, with pale purple margins: *tube* scarcely as long as the spathe in the lower flowers, and rather longer in the upper ones, bent forward near the limb: laciniæ unequal, obtuse: upper one more than double the size of the others, elliptic, slightly twisted or incurved near the point; the others oblong, with the margins also incurved or involute near the points: three lower ones marked

with a white spot, which is lanceolate in the lower one, and ovate in the others, running down in a narrow line to the base of the laciniæ, on each side of which it is bright purple. *Stamens* 3, ascending, inserted in the upper part of the tube, about the length of the style: *filaments* smooth: *anthers* linear, sagittate at the base, 2-celled: *pollen* white. *Style* smooth. *Stigmas* 3, widened at the point, spreading or reflexed.

A very splendid hybrid production, that was raised, in 1823, at the Nursery of Mr. Colvill, from seeds of G. *concolor*, that had been fertilized by the pollen of G. *cardinalis*; all the plants that have yet bloomed, have been exactly alike, not the slightest variation in them; which confirms our belief that the numbers of species of plants are daily increasing, in the same manner, by natural means, as we increase them by artificial ones; indeed we cannot see how it can be otherwise, particularly in the warm countries, where myriads of insects are continually flitting from flower to flower, and fertilizing one species with the pollen of another; by this means of producing hybrid plants in our collections, the flowers may be much improved in beauty and variety, as it is only to consider what two colours to be mixed, would cause an intermediate one, surpassing either, with part or all of the spots or marks belonging to both; and plants raised from the seeds of the mule plant, if fertilized by its own pollen, will all come as true as any species whatever, not, as has been advanced by some, return by degrees back to one or other of its parents; that is entire nonsense, as any one who practises raising mule plants must soon be convinced of; the present plant requires precisely the same treatment as the one in the next plate.

1. Spathe. 2. Perianthium spread open, to show the insertion of the Stamens. 3. One of the Stamens detached. 4. Germen, terminated by the Style, and 3 dilated fimbriate Stigmas.

Pub. by R. Ferrat. May 1826.

GLADIOLUS viperatus.

Perfumed Corn-flag.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.
GLADIOLUS. Supra, fol. 155.

G. *viperatus*, foliis ensiformibus glaucescentibus nervoso-striatis acutis, scapo simplici flexuoso subcernuo, lacinia perianthii suprema spathulata fornicata incurva; 3 exterioribus rhombeo-ovatis patentibus acutis: 2 interioribus, spathulatis acutis dependentibus.

Gladiolus viperatus. *Ker. in Botan. magaz.* 688. *Hort. Kew. ed.* 2. *v.* 1. *p.* 97. *Spreng. syst. veg.* 1. *p.* 152.

Gladiolus alatus. *Willden. sp. pl.* 1. *p.* 216. *Jacq. ic. rar.* 2. *t.* 259. *nec aliorum.*

Gladiolus orchidiflorus. *Andrews's reposit. t.* 241.

Root a bulb-tuber. *Sheaths* at the base tinged with purple. *Leaves* distichous, scarcely as long as the scape when full-grown, ensiform, acute, strongly nerved, and striated with several longitudinal lines, slightly glaucous. *Scape* simple, more or less flexuose, bending forward, cylindrical, of a glaucous colour. *Flowers* 8 to 10, in a compact spike, all facing one way. *Spathe* 2-valved, inclosing the tube of the flower; outer one lanceolate, acute, keeled near the point, with membranaceous margins, striated with numerous lines, glaucous: inner one much shorter, with a bifid point, and the margins more membranaceous. *Perianthium* tubular, 6-cleft, tube short, widening upwards; *upper segment* arched, and incurved, spathulate, narrow at the base, convex on the outside, and concave within, the point scarcely acute; 2 *middle, and the lower outside one* rhomboidally ovate, acute, the margins a little crumpled, of a greenish ash colour, with a purple line down the centre of each, and a large brownish yellow mark near the base of the lower one: 2 *inner lower ones* spathulate, acute, narrowing to the base, where joined to the outer segment, they become thickened, and have a prominent fleshy margin on each side, spotted with small red spots, the lamina ash-coloured, like the other segments, but marked with a purple mark, broad

at the base, and terminated in a sharp point, branched a little by the sides. *Stamens* 3, inserted in the tube, and bent round like the upper segment: *filaments* smooth, attached to the anthers, a little above the base: *anthers* linear, sagittate at the base, 2-celled: *pollen* yellow. *Style* smooth, curved round like the stamens, and about their length. *Stigmas* 3, the points bilamellate and fringed.

This curious and delightfully fragrant plant has, we believe, been lost some time from our collections, but has now been reintroduced again by Mr. Synnot, as has also the singular and elegant G. *alatus*, several plants of which have bloomed in Mr. Colvill's collection; although the colour of the present species is not so splendid as many others, yet its exquisite fragrance, and singular appearance, make it well deserving a place in every collection; it may also be grown as freely as the common *Tigridia pavonia*, either in the open air, or in a pit to be covered with lights in Winter; by either of those methods the bulbs will grow stronger, and produce larger flowers than if grown in pots, although the latter way is to be preferred if they are wanted to be placed in the Greenhouse or in rooms, and it is a good plan to cultivate some in each way, where there is convenience: if grown in pots, they should be planted in full one third fine sand, rather more than a third of light turfy loam, and the rest peat, all mixed well together, the pots to be well drained with a handful of potsherds, broken small, that the wet may pass off readily; as soon as they have done flowering, and the stalks begin to decay, they should have no more water given them, but the pots may be laid on their sides, or be placed in a frame under lights, not too much exposed to the sun; and care must be taken that the mice do not get at them, as they are apt to make great havock amongst them: in October they should be re-potted, and placed in a frame where frost will not get at them. Those planted in beds in the open air or in frames, will require exactly the same treatment as we have already mentioned under the Cape bulbs that we have published.

1. Spathe. 2. Perianthium spread open, to show the situation of the segments, the upper one taken off. 3. The same spread open to show the short tube and the insertion of the stamens, divested of all the segments except the upper and lower one. 4. Germen, terminated by the pendulous style, and 3 bilabiate Stigmas.

J.D.Smith Del. Pub by R Sweet June 1826. Waddell Sc

TULIPA præcox.

Early-flowering Tulip.

Natural Order. TULIPACRÆ. *Kth. synops.* 1. *p.* 292.
TULIPA. *Supra, fol.* 78.

T. *præcox*, caule unifloro glabro, flore erecto, perianthii foliolis ovato-lanceolatis acuminatis apice barbatis; interioribus multo minoribus, filamentis basi dilatatis, foliis ovato-lanceolatis canaliculato-undulatis margine ciliatis, bulbo lanato.
Tulipa præcox. *Tenore Synops. nov. plant. quæ in Prodromo Floræ Neapolitanæ, ann.* 1811-13 *edito, describuntur. p.* 40. *n.* 48. *Catalogus plant. hort. reg. neap. ann.* 1813. *p.* 108. *Spreng. syst. veg. v.* 2. *p.* 63.

Bulb surrounded with long dense wool, outside of which is a thin brown shell which nearly covers it. *Stem* smooth, cylindrical, from a foot to 15 inches in height, leafy. *Leaves* 4, in our specimens; lower ones clasping the stem, ovately lanceolate, acute, more or less undulate, clothed with a very short whitish pubescence, the margins ciliate, with unequal woolly hairs: upper leaves lanceolate, elongated to a taper point, the margins rolled inwards, also pubescent and ciliate. *Scape* smooth, slightly angular just below the flower. *Perianthium* of 6 leaflets, which are ovately lanceolate and taper-pointed, the points bearded; 3 outer ones larger and longer than the inner ones, of an orangy red inside, with a faint stripe down the centre, and a large greenish brown mark near the base, surrounded with yellow: 3 inner ones of a bright scarlet inside, and a strong yellow mark down the centre, with a dark velvet spot at the base, surrounded with yellow, two or 3 inequalities in the centre of each. *Stamens* 6, erect, surrounding the germen, and opposite to the leaflets of

the perianthium: *filaments* short, dilated at the base and tapering upwards, dark purple: *anthers* bright purple before they burst: *pollen* yellow. *Germen* bluntly 3-sided, about the length of the stamens, variegated with red and green. *Stigma* sessile, 3-lobed: lobes straight, channelled, and fringed.

Our drawing of this plant was taken in April last at the Nursery of Mr. Colvill, from bulbs that had been sent to him by M. Tenore, from the Royal Botanic Garden at Naples, with several other curious Italian plants; it differs from T. *turcica* in its woolly bulb and fringed leaves, and also from T. *oculus solis*, to which it is nearest related, by its fringed leaves, and the very unequal leaflets of the perianthium. Native of Naples, and therefore requires to be planted in a sheltered situation, or to be covered with litter or mats in very severe frost, or the bulbs will be liable to be injured. It requires the same sort of soil as the other species of Tulip; a light sandy soil will suit it best, and like the other species it may be increased by the offsets from the bulbs.

1. The outer shell of the bulb taken off on one side, to show the long wool with which it is clothed. 2. One of the filaments detached from the anther, to show how it was fixed at the base. 3. Anther, showing the hole at the base, where the point of the filament was attached. 4. Germen, terminated by the 3 straight, channelled, and fringed Stigmas.

E D Smith Del. Pub. by R Sweet June 1826. Waddell Sc.

GAGEA bracteolaris.

Sheathing bracted Gagea.

Natural Order. ASPHODELEÆ. *Brown prodr.* 1. *p.* 274.

GAGEA. Perianthium 6-partitum, subæquale, patens, persistens: *Stamina* 6: *filamenta* basi perianthio inserta, angusta, planiuscula: *antheræ* lineares, strictæ, basi insertæ. *Ovarium* superum, 3-loculare, 3-valve. *Stylus* in plerisque clavatus. *Stigma* triloba, fimbriata. *Semina* parva, numerosa, subrotunda.—Plantæ *gramineæ facie* Hypoxidum. Radix *parva, bulbosa.* Folia *pauca, obtuse mucronata, plus minus villosa.* Flores *lutei, corymbosi.* Pedunculus *angulatus, plus minus decompositus ramis sæpius brevissimis pedicellis longis.* Bracteæ *ad ramos solitariæ præter alias interdum inferius sparsas, foliaceæ. Genus ante cum* Ornithogalo *confusum, in quo corolla cito marcescit et inflorescentia longe diversa.* Salisbury in Annals of Botany, v. 2. p. 555.

G. *bracteolaris,* folio radicali unico lineari subtriquetro basi canaliculato erecto glabro; floralibus oppositis lanceolatis concavis, pedicellis subumbellatis triquetris pilosis, perianthii foliolis oblongo-lanceolatis obtusiusculis stellato-patentibus.

Gagea bracteolaris. *Salisb. in ann. bot.* 2. *p.* 556.

Ornithogalum luteum. *Linn. sp. pl.* 1. *p.* 306. *Pers. syn.* 1. *p.* 363. *non Eng. bot.*

Ornithogalum pratense. *Persoon in Usteri N. Bot. Annal.* 5. *Stuck. p.* 8. *t.* 2. *f.* 1.

Pyrrochiton. *Renealm. spec.* 91. *t.* 90.

Bulb small, solitary, clothed with a hardish brown shell, and from the base is produced a dense tuft of small fibres. *Leaf at the root* solitary, erect, nearly double the length of the scape, bluntly 3-sided, flat on the upper side, but slightly channelled near the base, the point bluntish, of a bright green and smooth. *Leaves on the scape* opposite, from 2 to 4, lanceolate, broad at the base, concave, slightly pubescent, the outer one double the size of the other. *Scape* slightly angular, nearly cylindrical, smooth and glossy. *Pedicles* triquetrous, umbelled, irregularly clothed with loose spreading hairs. *Perianthium* deeply 6-parted, nearly to the base,

inside of a bright yellow, the outside greenish and striate; segments oblongly lanceolate, bluntish, stellately spreading, 3 inner ones narrowest. *Stamens* 6, inserted in the base of the perianthium below the segments, which may all be taken off and the stamens will still remain: *filaments* narrow, flat, smooth, tapering upwards, inserted in the base of the anthers: *anthers* linear, straight: *pollen* yellow. *Germen* superior, triangular, narrow at the base, and dilated at the apex. *Style* straight, smooth, triangular. *Stigma* 3-lobed, fimbriate.

Several very distinct species of this genus appear to have been confused under the name of *Ornithogalum luteum*, which was first cleared up by R. A. Salisbury, Esq. in the second volume of the Annals of Botany; where our plant is shown to be distinct from the English one with which it is confused in many botanical works, although, we believe, no person would consider them as the same species, that had an opportunity of seeing them growing together. We have ascertained our plant to be the same as was intended by Linnæus, as we compared it with Renealm's figure, which is the authority for Linnæus's O. *luteum*; but as all the species of the genus have yellow flowers, and so many having been confused under the name of *luteum*, it is certainly best to drop the name altogether, and to adopt the one given it by Mr. Salisbury.

Several bulbs of this species were sent to Mr. Colvill, last Autumn, from Switzerland, by Mr. Schleicher, under the name of O. *luteum*; and several other species were received at the same time, of which we intend to publish figures in our future numbers, which will, we hope, be the means of clearing up their history a little more satisfactory; as they are early Spring flowering plants, coming into bloom at the same time as the Snowdrops and Crocus, they are very desirable for the flower garden, requiring only to be planted in the open border, and are increased by the offsets from the bulbs, or by seeds.

1. The 6 Stamens inserted in the lower part of the Perianthium, below the 6 segments which are taken off. 2. The triangular Germen, terminated by a triangular Style, and 3-lobed fimbriate Stigma.

E D Smith Del

Pub. by R Sweet ... 1826.

GALEGA biloba.

Two-lobed Goat's-Rue.

Natural Order. LEGUMINOSÆ. *Juss. gen.* 345.

Subordo I. *PAPILIONACEÆ. Embryo* homotropus pleurorhizeus nempè radiculâ super loborum commissuram pronâ. *Sepala* per æstivationem imbricata aut subvalvata. *Petala* in corollam papilionaceam disposita, semper ideò irregularia, staminaque imò calyci inserta seu perigyna.—Folia *simplicia aut simpliciter composita, nunquàm bi nec tripinnata.* DC. prodr. 2. p. 94.

Tribus II. *LOTEÆ. Embryo* homotropus. *Corolla* papilionacea. *Stamina* aut monadelpha, aut more ordinis diadelpha (9 et 1.) *Legumen* continuum uniloculare, aut rarius suturâ altera introflexâ biloculare. *Cotyledones* planiusculæ per germinationem in folia stomatibus donata conversæ. *DC. l. c. p.* 115.

Subtribus IV. *GALEGEÆ. Legumen* uniloculare. *Stamina* diadelpha, rarius monadelpha. Caules *herbacei fruticosi aut arborei.* Folia *primordialia aut alterna aut opposita disparia, imo simplici, altero pinnato.* DC. l. c. p. 143.

GALEGA. Calyx dentibus 5 subulatis subæqualibus. *Corolla* vexillo obovato-oblongo, carina obtusa. *Stamina* monadelpha, decimo nempè ad medium concreto. *Stylus* filiformis glaber. *Stigma* terminale punctiforme. *Legumen* teretiusculum torulosum oblique striatum. *Semina* cylindracea.—Herbæ *perennes glabræ erectæ.* Folia *impari-pinnata.* Stipulæ *ovatæ aut lanceolatæ semisagittatæ.* Racemi *axillares simplices multiflori.* Flores *albi aut cærulei.* DC. l. c. p. 248.

G. *biloba*, caule angulato-striato subflexuoso, foliolis oblongis sericeo-pubescentibus apice bilobis mucronatis, stipulis ovato-lanceolatis acutis serrato-sagittatis, floribus confertis, bracteis subulatis pedicellis duplo longioribus.
Galega biloba. *Swt. hort. brit. p.* 124.

A stout herbaceous perennial. *Stems* several from the same root, 3 to 5 feet high, erect, or a little flexuose, slightly angular and furrowed, or streaked with numerous lines, slightly pubescent. *Leaves* pinnate: *leaflets* alternate or sometimes opposite, 7 or 8 pair, and ter-

minated with an odd one, shortly petiolate, oblong or lanceolate, retuse, terminated in 2 round lobes, with a taper pointed soft mucro between them, the upper side of a dullish green, nearly smooth, the lower side densely clothed with a white silky pubescence: terminal one broadest and more dilated at the point: *rachis* slightly keeled, and thickly clothed with white silky hairs. *Stipules* ovately-lanceolate, acute and mucronate, semi-sagittate at the base, with long tapering appendages, more or less toothed. *Flowers* nodding, of a bluish lilac, in long dense racemes. *Peduncles* axillary, stout, furrowed. *Bractes* subulate, flattened a little near the base, and tapering to a fine slender point, about double the length of the pedicles. *Pedicles* short and slender. *Calyx* tubular, 5 toothed, the teeth nearly equal and subulate. *Vexillum* ovate, scarcely longer than the keel; *wings* shorter, sagittate at the base; *keel* unguiculate, emarginate at the point. *Stamens* 10, all connected into a tube, *pollen* orange-coloured. *Legumen* thickly clothed with silky hairs, and terminated by a smooth curved *Style*, and very small headed *Stigma*.

Our drawing of this plant was taken at the Nursery of Messrs. Whitley, Brames, and Milne, last Summer, who could not inform us of what country it is a native; it certainly is not described in any publication that we have had an opportunity of examining, but is, without doubt, a very distinct species; it appears to thrive well in the open borders of the flower garden, and may be occasionally increased by dividing at the root, or by seeds.

1. Calyx. 2. Vexillum. 3. The 2 alæ or wings. 4. Keel. 5. The 10 Stamens, all connected into a tube, but distinct at the points. 6. The young silky Pod, terminated by a smooth Style and small headed Stigma.

Pub. by R. Sweet June 1826.

SPARAXIS versicolor.

Various-coloured Sparaxis.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.

SPARAXIS. Inflorescentia disticho-spicata, alterna, remotius seorsim bivalvi spathacea; *spatha* membranacea ampliuscula aristato-lacera plerumque arido-sphacelata. *Perianthium* superum, erectum, infundibuliformi-patens, tubuloso-sexfidum: tubus gracilis brevior; limbus sexpartitus amplus regularis æqualis stellato-turbinatove explanatus. *Stamina* tubo adnata, inclusa, collaterali-inflexa, recto-inclinata, nunc adscendentia, rarius trifaria erecta. *Antheræ* lineares, a dorso appensæ. *Stylus* gracilis, directione staminum. *Stigmata* 3, angustius linearicomplicata, recurvato-divergentia. *Capsula* membranacea oblonga, rotundate trigona, torulosa; trilocularis, trivalvis; valvis septigeris. *Semina* biserialia, plurima, subglobosa.

Bulbo-tuber *ovatum reticulis multiplicibus tenuibus (externis sericeo-fibrosis) vestitum; folia* 4-10 *collaterali-disticha, ensata, dense striatula, latitudine bilineari ad uncialem, caulina sæpius in axillis bulbifera;* caulis *simplex vel paniculato-ramosus,* 3-*uncialis ad orgyalem;* flos *raro unicus, sæpius in ramo pauci, ampli, speciosi, colore quam maxime ludentes;* semina *magnitudine fere Sinapeos.* Ker in Botan. magaz. 1482.

S. *versicolor,* caule folioso erecto ramoso, foliis ensiformibus striato-nervosis uncinato-mucronatis, spica 3-4-flora, spatha scarioso-sphacelata multistriata longe aristata tubo perianthii triplo longiore, segmentis perianthii oblongis rotundato-obtusis.

Sparaxis tricolor β. *Botan. magaz.* 1482?

Bulb-tuber about the size of a Walnut, clothed with an elegantly netted fibrous coat. *Stem* leafy, about a foot high, producing many branches, all of which terminate with a spike of flowers. *Leaves* numerous, distichous, broadly ensiform, erect, of a pale green colour, or slightly glaucous, striated with numerous longitudinal veins, points acute, and terminated with a short sharp slightly hooked mucrone; inner margin membranaceous, and more or less oblique. *Scapes* higher than the leaves, flexuose, scarcely angular, and slightly flattened on the inner side. *Spikes* 3 or 4-flowered. *Spatha* 2-valved, membranaceous and scariose, streaked with numerous brown and purple stripes, and termi-

nated with several long taper-pointed segments. *Perianthium* funnel-form; tube short and slender, about a third shorter than the scariose sheath: limb 6-parted, the segments stellately spreading when expanded, oblong and bluntly rounded, of a bright purple colour, with lighter margins, and more or less clouded or diluted; near the base of the segments is an irregular dark spot or mark, below which it is of a bright light yellow. *Stamens* 3, inserted in the base of the limb: *filaments* erect, smooth, scarcely one-third the length of the limb, joined to the back of the anthers, a little above the base: *anthers* linear, the points bent inwards. *Germen* bluntly triangular. *Style* smooth, slender, about the length of the stamens. *Stigmas* 3, narrowly linear, channelled, and fimbriate on the upper side, spreading, the points a little recurved.

This very beautiful plant is the produce of another of the bulbs that were brought from the interior of the Cape, last Summer, by Mr. William Synnot, and several of them have flowered very strong at the Nursery of Mr. Colvill, without the least variation, so that there can be no doubt of its being a genuine species; it is readily distinguished from S. *tricolor*, to which it is nearest related, by its branched stem and the hooked mucro at the points of the leaves; it also produces bulbs in the axils of its leaves similar to S. *bulbifera;* a comparison of our figures and descriptions will readily show the difference between the present genus and SYNNOTIA, a genus proposed by us in a former number.

The bulbs of this species thrive best in a light sandy soil, like the other Cape bulbs to which it is related; and, like them, will succeed well to be planted in a bed, either in the open ground, or in a pit; if in the former way, the bulbs must be taken up after flowering, and laid to dry, out of the reach of frost, till the next Spring; and if grown in pots, they must be treated like other Cape bulbs. They are readily increased by the offsets from the bulbs.

1. The two valved Spathe, showing its unequal divisions. 2. Perianthium spread open and divested of the limb, showing the short tube, and the insertion of the stamens. 3. The triangular Germen, terminated by the smooth slender Style, and 3 linear fimbriate Stigmas.

E.D.Smith Del. Pub. by R.Sweet. July 1826. Weddell Sc.

FERRARIA uncinata.

Hooked-leaved Ferraria.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.
FERRARIA. *Supra, fol.* 148.

F. *uncinata*, caule brevi subramoso foliis duplo breviore, foliis lineari-ensiformibus striatis apice uncinatis, spathis inflatis subbifloris, segmentis perianthii acuminatis recurvis apice involutis, lobis antheræ approximatis basi distinctis.

Root tuberous, resembling a small flattish Potatoe. *Stems* 2 in our specimen from the same root, 4 or 5 inches in height, one of them simple, the other branched, not quite erect, but a little flexuose, clothed with leaves all the way up, smooth, and slightly spotted with small purple spots a little above the base. *Leaves* sheathing the stem at the base, linear or linearly ensiform, striated with numerous longitudinal lines, the points a little thickened and hooked inwards, about double the length of the stem, of a pale green colour. *Spathes* inflated, in our specimens 2-flowered, enclosing the flowers before the buds burst forth for expansion, lanceolate, acute, the points bent inwards, but not hooked like the leaves, much striated, the margins membranaceous. *Peduncles* short, surrounded by thin membranaceous bractes, which are enclosed within the spathe. *Perianthium* deeply 6-cleft, the segments narrowly lanceolate, and tapering to a very slender point, very much curled at the margins, the points rolled inwards, the inner ones about half the size of the outer ones, and becoming quite pendulous, all erect at the base, where they form a sort of bowl, the points and a great part of their length of an elegant light-brown, marked and spotted with dark blue at the bend, and a little above it. *Sta-*

mens 3: *filaments* united all their length in a long tube, which encloses the Style: *anthers* 2-lobed, joined by their back to the filaments, the lobes nearly erect, and approximating each other before they burst, but distinct at the base; when burst, the lobes spread apart at the base, and the anther is then heart-shaped: *pollen* yellow. *Germen* triangular. *Style* smooth, about the length of the stamens. *Stigmas* 3, each terminated with a pencil-like tuft of bristle-like segments, which are more or less branched, darkest at the base, the points of a glossy brownish yellow.

This curious little species of Ferraria is one of those already mentioned by us as having been lately introduced by Mr. Synnot from the Cape, and has flowered at the Nursery of Mr. Colvill, where our drawing was made in May last; it is a very neat little plant, and produces its flowers in succession for several days, thriving well in a mixture of light loam, peat, and sand, like the other Cape bulbs to which it is related; the same sort of soil is the most suitable for making beds for them, either in the open borders, or in pits to be covered with lights in Winter, the beds in the open air to be raised above the common level of the ground, and to be a little sloped on each side, that the bulbs may not rot, if there should be an over abundance of wet weather; as soon as they have done flowering, and the stalks are beginning to decay, those in the open ground must be taken up and laid to dry, out of the reach of frost, until the following Spring; or if left in the ground all the Winter, they will require covering with straw or fern, or some other sort of covering, in frosty weather, as the frost, if severe, will rot their roots: those planted in pits, with lights on them, will be safe to remain where they are, so as to be well covered in frosty weather, and to be exposed as much as possible to the air when the weather is mild; but care must be taken to keep the mice from them, or they will be apt to destroy a great many.

1. One of the largest segments of the Perianthium. 2. The smaller one. 3. The three Stamens, the filaments all connected into a tube at the base with spreading points. 4. Germen, terminated by a slender Style, and 3 Stigmas terminated by pencil-form appendages.

E. D. Smith Del. Pub. by R. Sweet, July 1826. Weddell Sc.

ORCHIS Rivini.

Rivinus's Orchis.

Natural Order. ORCHIDEÆ. *Brown prodr.* 1. *p.* 309.
Sect. I. MONANDRÆ. *Anthera* adnata subterminalis persistens. *Pollinis* massæ e lobulis angulatis elastice cohærentibus: basi affixæ. *Brown in Hort. Kew. ed.* 2. *v.* 5. *p.* 188.
ORCHIS. Supra, fol. 65.

O. *Rivini*, labello tripartito punctato-scabro: laciniis lateralibus apice dilatatis; intermedia biloba obtusa cum mucrone interjecto, perianthii foliolis acutis conniventibus, cornu inflato obtuso germine subæquali vel paulo breviore, bracteis lanceolatis acuminatis germine duplo brevioribus.
Orchis Rivini. *Gouan. illust. t.* 74. O. militaris. *Hall. helv. t.* 28.
Orchis mascula. *Rivin. hexapet. t.* 16. *bona.*
O. latifolia hiante cucullo major. *Vail. par.* 148. *t.* 31. *f.* 24.

Root consisting of two fleshy bulbs, from the top of which are produced some long fleshy fibrous roots. *Leaves* ovate or broadly lanceolate, lower ones bluntish, concave on the upper side and bluntly keeled on the lower, striated with faint longitudinal lines: stem-ones narrower, convolute, clasping the stem, taper-pointed. *Scape* leafy, angular, striate, smooth and glossy. *Flowers* rather crowded, in a close compact oval spike. *Bractes* membranaceous, lanceolate, tapering to a fine point, about half the length of the germen. *Germen* angular, twisted. *Leaflets of the Perianthium* connivent and adhering, arched over, pale ash colour on the outside, the inside elegantly striped with purple lines, oblong or broadly lanceolate and acute, middle one rather broadest and concave on the inside; two inner ones linear, of a bright purple. *Labellum* 3-parted, of a light purple, the upper side spotted with little tufts of short dark purple hairs; side-segments linear, widened near the point: middle one lengthened

out, two-lobed, with a purple mucro betwixt the lobes: lobes broad, spreading, the points a little oblique or slightly emarginate, not notched or toothed. *Spur* nearly straight or slightly curved inwards, narrowest at the base, the point blunt and inflated, a little shorter than the germen, or rarely of the same length. *Stamen* attached to the point of the stigma, lobes near together. *Pollen-masses* pedicled, and enclosed within a hood.

Bulbs of this beautiful species of Orchis were received by Mr. Colvill, last Winter, from Mr. Schleicher, of Bex, in Switzerland, with those of many other rare and beautiful species of this family, and many other rare plants and seeds: the present plant has been confused with O. *militaris* by various authors, which we believe must have arisen from their not having an opportunity of examining the two plants; we had the good fortune of seeing them both in bloom together at the Nursery of Mr. Colvill, where our drawings of them both were made, the beginning of May, and we have published them both in this Number, that their difference may be more readily perceived; the present is easily distinguished from O. *militaris* by its spur being more than double the size, and nearly as long as the germen; the bractes are also much longer, and of a different form altogether; the side segments of the labellum are of a different shape, and its upper side is not so thickly clothed with tufts of purple hairs, which are also much smaller, the colour of the flowers are also much paler, but that will probably vary in different specimens. The bulbs when received were planted in pots, in an equal mixture of light turfy loam, peat, and sand, where they appear to thrive, and have flowered very strong; but we believe there is little chance of increasing them in this country, except they were planted where O. *fusca*, or any nearly related British species grows wild; in such a situation there can be no doubt but they would establish themselves.

1. The three outer leaflets of the Perianthium, showing the elegant purple lines on the inside. 2. The two inner ones, which are narrow and linear. 3. Labellum, showing the little tufts of purple hairs on the upper surface. 4. The Anther attached to the Stigma, below which is the Spur, that is nearly as long as the germen. 5. Bracte that surrounds the base of the germen.

E. D. Smith. Del. Pub. by R. Sweet. July 1826. Woodstall Sc.

ORCHIS militaris.

Military Orchis.

Natural Order. ORCHIDEÆ. *Brown prodr.* 1. *p.* 309.

Sect. I. MONANDRÆ. *Anthera* adnata subterminalis persistens. *Pollinis massæ* e lobulis angulatis elastice cohærentibus: basi affixæ. *Brown in Hort. Kew. ed.* 2. *v.* 5. *p.* 188.

ORCHIS. Supra, fol. 65.

O. *militaris*, labello tripartito fasciculato-piloso: laciniis lateralibus linearibus; intermedia biloba obtusa cum mucrone interjecto, perianthii foliolis acutis conniventibus, cornu recto germine duplo breviore, bracteis obsoletis.

Orchis militaris. *Jacq. ic. rar. t.* 598. *Willden. sp. pl.* 4. *p.* 22. *(excl. synon. Hall. Gouan. Rivin. &c.) Hort. Kew. ed.* 2. *v.* 4. *(excl. synon. Eng. bot.* 1873.*) Pers. syn.* 2. *p.* 504. *(excl. synon. Hall. helv. t.* 28.*)*

Root consisting of two fleshy bulbs, from the upper part of which are produced some long fleshy fibrous roots. *Leaves* lanceolate, acute, concave on the upper side and bluntly keeled on the lower, striated with longitudinal lines, punctate, smooth and glossy. *Scape* leafy, angular and furrowed, smooth and glossy. *Spike* pyramidal. *Bractes* very short, membranaceous, resembling small scales, which are ovate, the lower ones obtuse, upper ones acute, from 4 to 6 times shorter than the germen. *Germen* angular, twisted. *Leaflets of the Perianthium* connivent and adhering, arched over, pale ash-colour on the outside: *three outer ones* oblongly lanceolate, taper-pointed, narrower than in O. *Rivini*; the middle one shortest and broadest, concave inside, all marked with elegant dark purple stripes: *inner ones* linear, dark purple. *Labellum* 3-parted, narrower than in O. *Rivini*, of a bright rosy purple, elegantly spotted on the upper side with tufts of dark purple hairs: side segments linear: middle one lengthened out, 2-lobed, with a purple mucro betwixt the lobes, which are bluntly rounded. *Spur* straight, short and blunt, about half or scarcely half the length of the germen. *Stamen* attached to the point of the stigma, 2-lobed, lobes approximating each other. *Pollen-masses* pedicled, and enclosed within a hood; *pollen* brownish ash-colour.

This magnificent plant was received from Mr. Schleicher, of Bex, at the same time as the preceding species,

from which it may be readily distinguished by the marks which we have already pointed out under that species; the spur in this is very short, the bractes are very small, resembling little scales, the flower is of a darker colour, the tufts of hairs on the labellum are more numerous, larger, and of a darker colour; there can be no doubt but this is the O. *militaris* of Willdenow, Jacquin, and the Hortus Kewensis, but it has nothing to do either with O. *militaris*, or O. *fusca* of English Botany, which was suspected to be the case by Mr. Bicheno, in his observations on the British Species, in the 12th volume, p. 28 to 34, of the Linnean Society's transactions; the English O. *militaris* will therefore, as he supposes, require a different name; and as Sir J. E. Smith was the first English writer who distinguished it from O. *fusca*, it may be named O. *Smithii*; the Synonyms are O. *militaris*, Eng. bot. t. 1873, and Bicheno, Linn. trans. v. 12. p. 31; but not of Willdenow, and other continental Botanists. We feel much obliged to Mr. David Don for assisting us to examine the various figures and synonyms in the different works in Mr. Lambert's Library, to clear up the confusion of the different species. The bulbs of this species when received from Switzerland were planted in pots, in an equal mixture of light turfy loam, peat, and sand; but they would succeed much better, if a bed were made for them in rather a sloping situation, that the roots might not get rotten with the wet remaining about them; the soil to be composed of the same materials, with a quantity of pounded chalk mixed with it, and to be a little shaded from the scorching sun in Summer, to imitate the grass amongst which they grow in their native places, and which will be consequently wanting here: but the best way to preserve them perpetually, would be as we mentioned under the last species, to plant some in the same sort of situation as O. *fusca*, O. *Smithii*, or any other nearly related species grows in naturally; they would then without doubt ripen their seeds, and naturalize themselves.

1. The small Bracte at the base of the germen. 2. The three outer leaflets of the Perianthium. 3. The two inner linear leaflets. 4. Labellum, showing the fascicles of purple hairs on the upper side. 5. The twisted germen terminated by the column, the anther attached to the stigma, showing the two lobes approximating each other, below which is the spur about half the length of the germen.

E.D.Smith Del. Pub.d by R.Sweet July 1826 Woodcut.

ACONITUM barbatum.

Bearded Wolfs-bane.

Natural Order. RANUNCULACEÆ. *DC. syst.* 1. *p.* 127.

Tribus IV. *HELLEBOREÆ.* Æstivatio calycis et corollæ imbricata. *Petala* nunc 0, nunc 5-10 (nectaria Lin.) irregularia sæpiùs bilabiata nectarifera; *calyx* sæpiùs coloratus petaloideus. *Carpella* polysperma sæpiùs libera, suturâ longitudinali intùs dehiscentia, interdùm in pericarpium multiloculare coalita; *semina* horizontalia, placentis secus suturam dispositis adfixa.— Caules *herbacei;* folia *alterna, nunc radicalia, nunc sæpiùs caulina;* flores *variè dispositi, colores omnes admittentes, duplici modo pleni,* filamentis *nempè in petala plana, aut antheris in petala bilabiata evadentibus.* DC. l. c. p. 306.

ACONITUM. Calycis sepala 5 petaloidea decidua, superius (galea) amplum concavum cassidæforme, 2 lateralia (alæ) orbiculata, 2 inferiora oblonga. *Petala* 5 interdùm numero irregularia, 3 minima unguiformia sæpè in stamina conversa, 2 superiora (cuculli) sub galeâ incumbentia, longè unguiculata, apice in saccum expansa, sacci fundo seu petali apice (calcar) calloso incurvo, ore in limbum (labium) oblongum emarginatum producto. *Stamina* numerosa. *Capsulæ* 3-5, polyspermæ.— Herbæ *perennes;* radices *tuberosæ, tuberibus nunc fibrillas agentibus, nunc napiformibus cum iis commixtis;* folia *caulina petiolata palmatim 3-5-partita, lobis inciso-dentatis multifidisve.* Racemi *terminales; pedicelli uniflori ex axillis bractearum orti, bracteolas 2 gerentes.* Flores *ampli irregulares nunc ochroleuci, nunc cærulei aut albi.* DC. l. c. p. 364.

Sect. II. LYCOCTONUM. Flores ochroleuci albidi aut cærulescentes; galea conica elongata obtusa anticè vix mucronata.— *Radix tuberosa fibrillas emittens. Folia palmati-lobata, lobis subcuneatis apice inciso-dentatis.*

A. *barbatum,* galea conica obtusa, calcare recto, labio obovato, alis barbato-ciliatis, bracteis minimis, caule pubescente, foliis 5-partitis; lobis linearibus acuminatis. *DC. syst.* 1. *p.* 367.

Aconitum barbatum. *Patrin. Pers. syn.* 2. *p.* 83. *Poir. supl.* 1. *p.* 114. *DC. prodr.* 1. *p.* 58. *Deless. ic. sel.* 1. *t.* 64. *Spreng. syst. veg.* 2. *p.* 620.

Perennial. Roots tuberous, with branching fibres. *Stems* several from the same root, erect, 2 to 4 feet high, paniculately branching, clothed with a short dense pubescence. *Leaves* palmately 5-parted, nearly to the base, or sometimes 7-parted: the segments pinnatifid

and divaricately spreading, taper-pointed, often lobed again, the lobes linear and acuminate, slightly pubescent on both sides, the upper side of a dark green and yellowish underneath, strongly nerved underneath, the nerves much branched, and clothed with long spreading hairs. *Petioles* long, much flattened on the upper side and keeled on the lower, widened at the base, thinly covered with long spreading hairs. *Racemes* very long, erect, close-flowered, densely pubescent. *Bractes* at the base of the petioles, linearly subulate, longest at the base of the lowermost flowers: *bracteolæ* or small bractes, 2 on each pedicle, very small, pubescent. *Pedicles* erect, shorter than the flowers, densely pubescent. *Flowers* of a pale sulphur colour, pubescent outside. *Sepals* 5, the upper one hollow and terminated in a short blunt straight helmet, the 2 next orbicular, and the 2 lower ones oblong, obtuse, all bearded inside with long white hairs. *Petals* 5, the 3 lower ones very small, unguiform, or like barren stamens, 2 upper ones included in the helmet, each with a long unguis, terminated in a blunt callous green spur, and ending in an emarginate lip. *Stamens* many; *filaments* broadly winged at the base, and attenuated at the points. *Capsules* 3, pubescent, and veined.

The different species of this genus when grown together in the gardens, are very subject to variation when raised from seeds, which is the case with all extensive genera when grown together, as the insects in search of honey fertilize one with the pollen of another; the number, therefore, of different sorts of Aconitum are greatly increased within these few years, many of which are hybrid productions; the present plant is very distinct from all others, but there will probably soon be hybrid productions between it and some of the others; they are mostly stately plants, and are proper subjects for the front of shrubberies, or the back of large flower-borders, thriving well in the common garden soil.

Drawn at Mr. Colvill's Nursery, last Autumn.

1. The upper Sepal. 2. The two orbicular side ones. 3. The two lower ones. 4. The five Petals, the three lower ones very small, the two upper ones with long unguis, each terminated in a blunt callous spur, and ending in an emarginate lip. 5. Stamens, shewing the winged base. 6. The three Capsules.

E D Smith Del

Pub. by R Sweet Aug. 1826.

Weddell

ANDROCYMBIUM eucomoides.

Tulip-leaved Androcymbium.

Natural Order. MELANTHACEÆ. *Brown prodr. p.* 272.

ANDROCYMBIUM. Perianthium 6-phyllum, cucullatum, membranaceum; unguibus angusto-carnosus. *Stamina* 6: *filamenta* carnosa mediis foliolis inserta. *Capsulæ* 3, basi connatæ.

A. *eucomoides*, foliis oblongo-lanceolatis acutis carinatis cucullatis reticulatis, caule subquinquefloro, floribus sessilibus confertis, filamentis incurvis.

Androcymbium eucomoides. *Willden. mag. naturf. ficunde jahr.* 2. *p.* 21. *Link enum. h. ber.* 1. *p.* 348. *Steudel nomen.* 1. *p.* 43. *Spreng. syst. veg.* 2. *p.* 143.

Melanthium eucomoides. *Jacq. ic. rar.* 2. *t.* 452. *Collect. suppl.* 104. *Willden. sp. pl.* 2. *p.* 269. *Botan. magaz.* 641. *Pers. syn.* 1. *p.* 397.

Root a bulb-tuber, large and solid, and covered with a brown shell, very similar to a Tulip, or like Ornithoglossum at No. 131. *Stems* 1 or 2, short and crooked, slender, smooth, cylindrical, of a reddish brown colour. *Leaves* sessile, smooth and glossy, distichous or fan-shaped, very similar to a Tulip, oblongly lanceolate, acute, boat-shaped, the upper side hollow or concave, underneath sharply keeled, the points bent inwards, reticulately veined, of a pale green colour; inner ones smallest. *Flowers* 5, in several specimens that we have examined, and which appears to be the proper number, very much crowded. *Perianthium* of 6 leaflets, the unguis narrower and succulent, longer than the limb, which is membranaceous, subhastate, embracing the filament, and tapering to a slender point, of a greenish white colour. *Stamens* 6, inserted in the base of the limb, which encloses them; *filaments* very thick and

succulent at the base, becoming slender at the point, which curves inward, attached to the back of the anthers; *pollen* yellow. *Capsules* 3, connected at the base, obsoletely 3-sided, punctate with numerous small dots, many seeded. *Styles* 3, smooth, bluntly triangular, the points slightly bent outwards. *Stigmas* very small, blunt, brown points.

Bulbs of this curious plant were brought from the Cape last Summer by Mr. Synnot, and have flowered this Spring at the Nursery of Mr. Colvill, where our drawing was made. It is certainly a very curious and distinct genus, which was first established by Willdenow, and has been adopted by Link and Sprengel, and also by Mr. Burchell, in his travels at the Cape, where another species is described. The bulbs are so exactly similar to that of a Tulip, that we believe no person would be able to recognise the difference, without previous knowledge, and it requires precisely the same sort of treatment; if grown in pots, the best soil is an equal portion of light turfy loam, peat, and sand; and the same sort of soil will suit them, if grown with other bulbs in beds in the open air, or any light soil, such as is used for Tulips, or other bulbs; they should be put in the ground early in Spring; the latter end of March, or beginning of April, is the best time, if planted in the open air; after they have done flowering, and the stems are beginning to be dried up, the bulbs must be taken out of the ground, and laid to dry out of the reach of frost until the following Spring; or if left in all the Winter, they will require to be well covered with straw or mats, that the frost may not get at them. If grown in pots, and kept in frames or in the greenhouse, they may be planted in October, but will require no water till they begin to grow, and have filled their pots with roots.

1. One of the flowers entire, taken from the other four to show it distinctly. 2. One of the leaflets of the Perianthium, with one of the Stamens enclosed in it, the limb membranaceous, and the base fleshy. 3. The 3 Capsules, all connected at the base, and terminated with 3 slightly recurved Styles, and small brown Stigmas.

E. D. Smith Del.   Pub by R. Sweet Aug 1826.   Weddell Sc.

MONARDA Russelliana.

Dr. Russell's Monarda.

Natural Order. LABIATÆ. *Brown prodr.* 499.
Sect. I. Stamina 2 fertilia; v. dum 4 fertilia. Antheræ omnium dimidiatæ.
MONARDA. Supra, fol. 98.

M. *Russelliana*, caule glabro ramoso acutangulo apice pubescente, foliis ovatis acuminatis serratis glabris subciliatis: basi rotundatis: apice subrevolutis, capitulis congestis subproliferis, bracteis coloratis ovatis ciliatis, labio inferiore revoluto trilobo.
Monarda Russelliana. *Nutt. trav. in the Arkansa, p.* 141. *Hook. exot. flor. t.* 130. *Sims in Botan. Magaz.* 2513. *Swt. hort. brit. p.* 311.

Root perennial, herbaceous. *Stems* several, erect, branching, from 18 inches to 2 feet high, smooth and glossy on the lower part, the upper part pubescent, acutely 4-angled, between the angles channelled, and striate. *Leaves* opposite, on short footstalks, ovate, taper-pointed, more or less revolute at the points, sharply but distantly serrate, rounded at the base; upper side of a glossy green, but slightly hairy; underneath strongly and numerously nerved, and punctate with innumerable very small dots; margins finely ciliate. *Flowers* in a very close head, which is sometimes proliferous. *Bractes* about 6, unequal in size, ovate, acute, entire, ciliate, variously coloured, with purple, green, and white. *Calyx* tubular, pubescent, marked with numerous elevated streaks, curved towards the point, 5-toothed, teeth sharp, spreading, purplish, fringed with short hairs, that are tipped with little purple glands. *Corolla* 2-lipped, ringent, pubescent; tube

very slender at the base, and increasing in size towards the mouth: upper lip white, slender, linear, obtuse, entire at the point, keeled at the back: lower lip revolute, 3-lobed, undulate, elegantly spotted and marked in 3 lines, with bright red spots and marks. *Stamens* 2, joined together by the one-celled anthers: *filaments* long, smooth, curved downwards, inserted in the mouth of the tube: *anthers* joined to the filaments by their back. *Style* smooth, longer than the stamens, also curved downwards. *Stigma* bifid, the lower segment 3 times the length of the upper one.

This beautiful and elegant species of Monarda was found by Mr. Nuttall in the valley of the Arkansa, in North America, and is named by him in memory of his late friend and companion Dr. Russell; it is certainly the most beautiful and delicate plant of the genus, and is quite hardy, having stood well all last Winter in the open ground, without any protection; figures of it have already been published in the Botanical Magazine, and in Dr. Hooker's Exotic Flora; but they are such weak specimens, that they do not give any idea of the beauty of the plant: the divisions of the stigmas in the latter figure are represented of nearly equal lengths, which we believe is not the case in any species of Monarda; and it is very probable that the mistake originated with the engraver, and is correct in the original drawing, as we know the engravers are very apt to commit such errors if they are not well looked after.

Plants of this species were received by Mr. Colvill from America the Autumn before last, and he was also presented with a plant of it from Mr. Barclay, of Bury-hill; it succeeds well in the open borders in a rich light soil, and is readily increased by cuttings, or by parting at the root. Our drawing was made last Summer at Mr. Colvill's Nursery.

1. Calyx, showing the spreading fringed segments. 2. Upper lip of the Corolla, with two very small sterile filaments, inserted about the middle. 3. Lower lip spread open, showing the 3 lobes, and the insertion of the two filaments, the anthers attached together. 4. Style terminated by a cleft Stigma; one of the segments very short, the other elongated.

E.D.Smith Del. Pub.d by R.Sweet Aug.1826. Waddell Sc.

ŒNOTHERA tenella.

Slender-twigged Œnothera.

Natural Order. ONAGRARIÆ. *Juss. ann. mus.* 3. *p.* 315.
ŒNOTHERA. Supra, fol. 5. et 133.

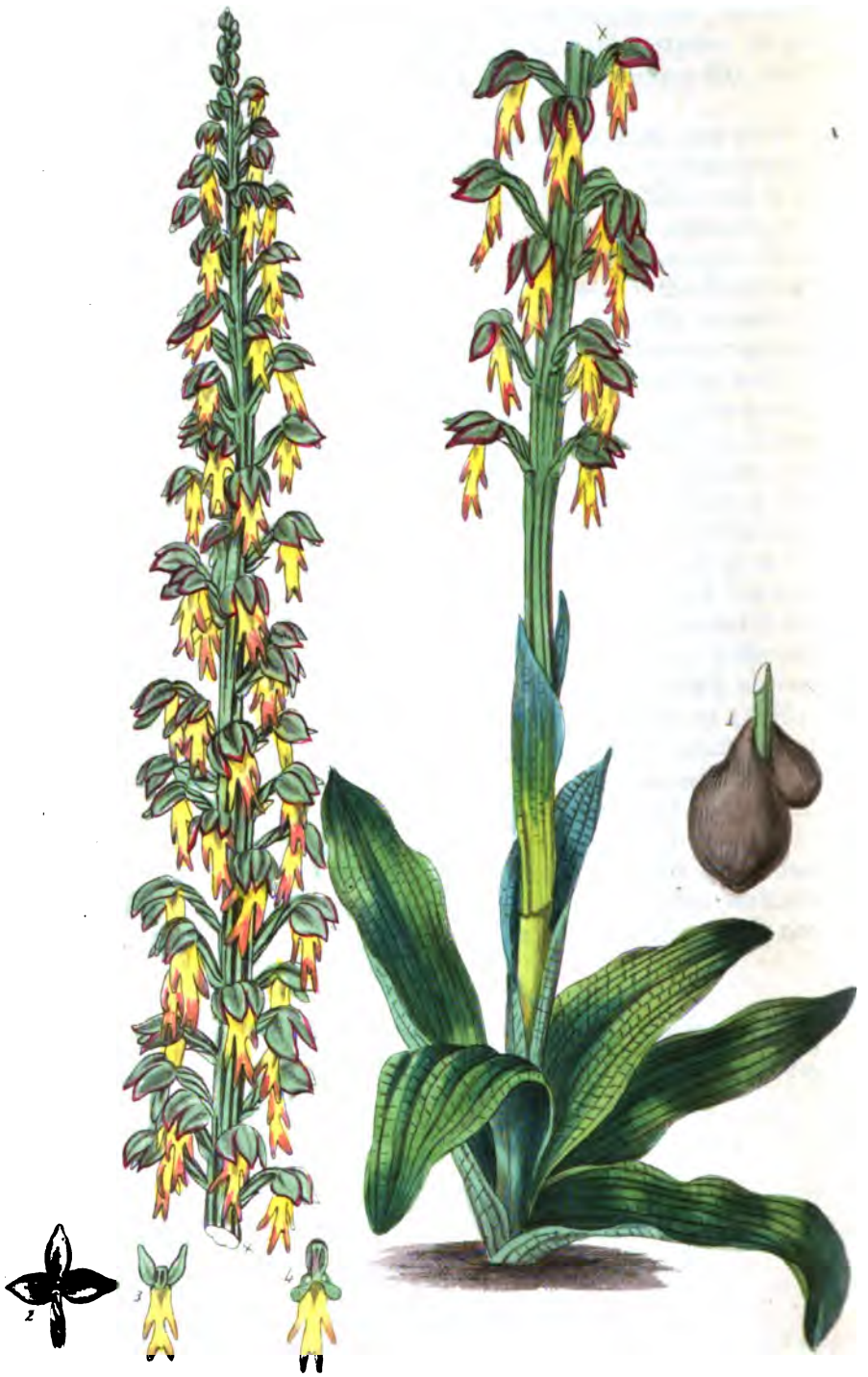
Œ. *tenella,* ramis gracilibus patulis, foliis sessilibus lanceolato-linearibus spathulatisve obtusis integerrimis dentatisque, petalis calyce duplo longiore, filamentis alternis brevissimis, capsulis sulcatis cylindricis curvatis.
Œnothera tenella. *Cavan. Ic.* 4. *p.* 66. *t.* 396. *f.* 2. *Ruiz et Pav. flor. peruv.* 3. *p.* 80. *t.* 316. *f.* 6. *Sims Botan. magaz.* 2424. *Pers. synops.* 1. *p.* 408. *Spreng. syst. veg.* 2. *p.* 228. *Swt. hort. brit. p.* 152.

Annual. *Stems* a little suffrutescent at the base, more or less branched: *branches* slender, spreading, smooth or slightly pubescent. *Leaves* sessile, variable, of a pale green, or slightly glaucescent; the lower ones spathulate, blunt, and much attenuated at the base; middle ones lanceolately linear, and not so blunt; upper ones linear and acute; all channelled on the upper side, and bluntly keeled on the lower, entire, or sometimes slightly toothed, with very small blunt teeth, clothed on both sides with very short woolly down. *Flowers* axillary, solitary, sessile. *Calyx* with a very short tube, four-cleft; segments lanceolate, acute, concave inwards, the points of each pair cohering, and clothed with a short thin pubescence. *Petals* 4, inserted in the upper part of the tube of the calyx, obovate or broadly wedge-shaped, slightly crenulate at the points, striate, about double the length of the segments of the calyx, of a bluish purple. *Stamens* 8, inserted in the upper part of the tube; *filaments* flat, every other one, very short,

about one-third the length of the alternate one; *anthers* purple; *pollen* grey. *Style* smooth, dark purple. *Stigma* 4-lobed, spreading, dark purple, the lobes flat, and fimbriate on the upper side.

Our drawing of this plant was taken from one growing in our garden last Summer; it is a very handsome annual, has lately been introduced from Chili, and is a great acquisition to our collection of hardy annuals, requiring no other care than to be sown in the open borders, and to be kept free from weeds, and if the Summer prove dry, it will require to be occasionally watered; the seeds may be sown at various times, to have a regular succession of flowers; some may be sown the end of March or beginning of April, some more may be sown the beginning of June, and again in July; so that if the weather prove favourable, it will continue to bloom till Christmas; many other annuals should be treated in the same manner, to keep up a regular succession of bloom, not, as is the more usual method, to sow them all at once. O. *Romanzovii* is another beautiful annual, that has not been long introduced; it is a very distinct species from the present, and also from O. *purpurea;* more different from the latter than the present species, which agrees with it in the colour of its leaves, while those of O. *Romanzovii* are of a deeper green. In the Horticultural Transactions, it is stated that O. *Romanzovii* of the Botanical Register, is nothing more than O. *purpurea*, as the writer had seen the plants from which the drawing was made; we certainly cannot say what the drawing was made from, but we understand the writer's sight is not always very good, so that his opinion is not always to be depended on.

1. Germen terminated by the 4-cleft Calyx, divested of the Petals. 2. The 8 Stamens inserted in the mouth of the Calyx, every other one about 3 times the length of the alternate one. 3. Germen divested of the Calyx and Corolla, terminated by the purple Style, and 4-lobed fimbriate Stigma.



J. Smith Del. Pub by R. Sweet Aug.st 1826. Wad del et Lit

ACERAS anthropophora.

Green-man Aceras.

Natural Order. ORCHIDEÆ. *Brown prodr.* 1. *p.* 309.
Sect. I. MONANDRÆ. *Anthera* adnata subterminalis persistens. *Pollinis massæ* e lobulis angulatis elastice cohærentibus: basi affixæ. *Brown Hort. Kew. ed.* 2. *v.* 5. *p.* 188.
ACERAS. Perianthium ringens. *Labellum* ecalcaratum. *Glandulæ* pedicellorum pollinis cucullo communi inclusæ. *Brown.*

A. *anthropophora,* labello germine longiore. *Brown Hort. Kew. ed.* 2. *v.* 5. *p.* 191. *Smith comp. flor. brit. ed.* 4. *p.* 143.
Ophrys anthropophora. *Willden. sp. pl.* 4. *p.* 63. *Sm. Eng. bot. t.* 29.

Root solid, consisting of 2 roundly oval fleshy tubers, above which are several fleshy fibres, which nourish the plant for the season. *Leaves* several, ovately or broadly lanceolate, lower ones bluntish, upper ones acute, sheathing the scape, longitudinally lined, and reticulately veined. *Scape* a foot to 18 inches in height, leafy, more or less angular. *Spike* 9 inches to a foot in length, producing from 60 to 80 flowers. *Bractes* narrowly lanceolate, taper-pointed, lower ones nearly as long as the germen, upper ones about half the length of the germen. *Perianthium* of 5 leaflets, the three outer ones ovate, acute, connivent, two inner ones narrower and blunter, green, the larger ones edged with reddish brown. *Labellum* without a spur, yellow, tinged with brown, longer than the germen, three parted; side segments narrow, linear; middle one bifid, with a small obsolete tooth in the centre, the lobes linear and spreading; it may be altogether fancifully compared to a

man with his arms and feet cut off, like those of the *Orchis militaris* tribe. *Stamen* attached to the point of the stigma, 2-lobed; lobes approximating each other. *Pollen masses* pedicled, pale yellow, and enclosed within a hood. *Germen* twisted.

The strong specimen of the plant represented in our figure, was grown at the Nursery of Mr. Pamplin, in the King's-road, Chelsea, where our drawing was made last Summer; it belongs to a collection of curious British plants collected and grown by Mr. William Pamplin, jun., who is much attached to the study of British Botany. Mr. Pamplin has now removed his establishment from the King's-road, to the more airy and healthy situation of Lavender-hill, in the Wandsworth-road, at a pleasant distance from London, and where the choice herbaceous, and other plants, may be expected to thrive much better than nearer the smoke of the metropolis; we understand that he intends to cultivate a select collection of the choicest sorts, which we have no doubt will, with proper treatment, succeed very well.

The present plant is a native of England, growing chiefly by the sides of chalky banks, and succeeds very well, (as do many others of this family which prefer the same situations,) in a bank made up of a light sandy loam, with a proportion of chalk mixed with it; the only thing to be guarded against is, that the roots may not be rotted by too much moisture; or be thrown out of the ground, or eaten by worms or caterpillars.

1. The Bulbs of the plant. 2. The twisted Germen, terminated by the 3 outer leaflets of the Perianthium. 3. Labellum, and 2 inner smaller leaflets. 4. The Anther fixed to the Stigma, and enclosed in a hood; the two pollen masses pedicelled, and loosened from the hood, one spreading out on each side.

J. Smith Del. Pub.d by R. Sweet Sep. 1826. Woodcut.

SALVIA interrupta.

Ash-leaved Sage.

Natural Order. LABIATÆ. *Brown prodr.* 499.
SALVIA. Supra, fol. 26.
Sect. 1. Calyce trilobo ampliato.—††. *Foliis divisis et compositis.*

S. *interrupta,* caule frutescente erecto, foliis interrupte pinnatis: foliolis oblongo-lanceolatis rugosis erosis subtus incanis inæquilateralibus, bracteis ovatis brevissimis, calycibus villoso-viscosis trilobis: lobo superiore tridentato; dente intermedio bifido.
Salvia interrupta. *Schousb. maroc. p.* 6. *t.* 1. *Vahl enumer.* 1. *p.* 226. *Willd. enum.* 1. *p.* 44. *Hort. Kew. ed.* 2. *v.* 1. *p.* 65. *Ræm. et Schult. syst. v.* 1. *p.* 218. *Spreng. syst. veg.* 1. *p.* 57.

Stem frutescent, erect, the lower part clothed with a brown bark, which scales off at different times, the upper part densely clothed with short villous hairs, also viscous. *Leaves* opposite, crossing each other, about a span or more in length, interruptedly pinnate, the petioles dilated, and clasping the stem at the base, and running down the stem, which forms a prominent angle, also clothed with short villous unequal hairs: *larger leaflets* generally 5, side ones mostly opposite, with short footstalks, terminal one much the largest, generally 3 inches in length, the lower ones shortest and smallest; all oblong, or oblongly lanceolate, acute, or sometimes bluntish, very unequal sided, rugose, the margins crenate or erose, of a glossy green on the upper side, and smooth on the oldest leaves, the younger ones hairy; underneath reticulately veined, and clothed with a thin white tomentum; *small leaflets,* which are betwixt the others, very unequal in size, sessile, round, opposite or alternate, their margins recurved, also unequal sided. *Flower-stems* long, bluntly quadrangular. *Flowers* in a whorled spike, the whorls at some distance from each other,

producing from 6 to 10 flowers in each. *Bractes* very small, ovate, fringed, dilated at the base, lower ones longest and narrowest, and terminating in a taper point, the inner ones much broader, shorter, and more obtuse. *Peduncles* short, and crowded, from 3 to 5 on each side of the stem. *Calyx* 3-lobed, thickly clothed with villous hairs, which are tipped with viscous glands, deeply channelled with several furrows, the nerves prominent; 2 lower lobes ovate, acute, upper one 3-toothed, the 2 side teeth acute and spreading, middle one very short and blunt, and generally bifid. *Corolla* large and inflated, 2-lipped, white, tinged with a bluish blush, hairy on the outside, and bearded inside in the throat with a tuft of stiff, bluntish, coloured hairs: helmet connivent, bifid at the point, the segments rounded: lower lip 3-lobed; side-lobes short, terminal one large, obcordate, spreading. *Stamens* 2, inserted in the tube: *filaments* jointed, and attached to each other near the centre. *Style* smooth, longer than the stamens, the point curved inwards. *Stigma* 2-cleft, the upper segment shortest. *Seeds* 4, seated on a crown, as in S. *nubicola*.

Plants of this fine species of Salvia were raised last year at the Nursery of Mr. Colvill, from seeds given us by A. B. Lambert, Esq., who had received them from Don Mariano Lagasca, with many other curious seeds; the size of our work would not do justice to the grandeur of the plant, as we could only show the upper part of the spike of flowers, with a leaf. The plants are suffrutescent, and ours have now attained the height of from 2 to 3 feet with several branches, but they require to be supported with a stick, or they would be liable to get broken with the weight of their leaves; it succeeds well in any rich light soil, and may be increased by seeds, or cuttings, but will require a little covering in Winter, or to be planted in a sheltered situation, as it is a native of Barbary.

1. Calyx. 2. Corolla spread open, to show the bearded throat, and the insertion of the two fertile Stamens, the filaments jointed and connected about the middle; also two short barren ones, one on each side. 3. The 4 seeds seated on a crown, terminated by the Style and 2-cleft Stigma, the upper segment shortest.

ERPETION reniforme.

Kidney-leaved Spurless Violet.

Natural Order. VIOLARIEÆ. *DC. prodr.* 1. *p.* 287.

Tribus I. *VIOLEÆ. Petala* inter se inæqualia; sepala 3 exteriora sæpiùs latiora, et 2 interiora. *Pericarpia* dehiscentiâ, loculicidâ, nempè suturæ valvarum cum placentâ alternantes et ideò valvæ medio placentiferæ dictæ. *Stamina* petalis alterna; filamenta dilatata, ultrà antheras producta, libera (approximata aut coarctata) vel rarò coalita; loculi antherarum tardiùs bivalves. *DC. prodr.* 1. *p.* 288.

ERPETION. Calycis sepala inæqualia, omnia plus minùs deorsùm in appendices auriculæformes producta, post anthesin reflexa. *Petala* inæqualia, æstivatione convolutivâ; inferius basi concavum in calcar non productum. *Stamina* 5 approximata aut coarctata (nec coalita) ad apicem dentium tori pentagoni inserta. *Filamenta* basi dilatata oblonga, antheras demissius gerentia, lobi antherarum distinctis basi subdivergentes, stamina 2 anteriora dorso appendices subulatas nectariferas in calcar intrantes gerentia. *Ovarium* superum. *Stigma* inconspicua. *Capsula* trigona, 3-valvis, polysperma valvulæ elasticæ post maturationem contractæ semina ejicientes. *Semina* horizontalia, manifestè carunculata, ovoidea et nitida.

E. *reniforme*, caulis trunco abbreviato stolonifero, foliis glabris subfasciculato-confertis reniformibus subrotundisve repando-dentatis punctatis, stipulis lineari-subulatis acuminatis, sepalis lanceolatis vix productis, petalis reflexis infero subtùs gibboso ampliato.

Erpetion cymbalariæ. *DC. Mss. in Herb. Lamb.*
Viola reniformis. *Brown inedit. ex DC. prodr.* 1. *p.* 305.
Viola? hederacea β elatines. *DC. prodr.* 1. *p.* 305.

Perennial, stoloniferous, stems very short or scarcely any, fleshy, numerous, crowded. *Leaves* crowded in fascicles, roundish kidney shaped, repandly dentate with very small blunt teeth, smooth and glossy, attenuated at the base and running a short way down the petioles, conspicuously nerved underneath, nerves several and branched, dotted with innumerable minute dots on both sides. *Petioles* very variable in length, according to the situation in which the plant is grown, from 1 to 4 inches, slightly winged on each side, and raised in the middle on the upper side, underneath rounded, smooth or slightly pubescent when examined with a lens. *Stipules* linearly subulate, broadest at the base and tapering to a fine slender point, rather succulent, not membrana-

ceous. *Peduncles* axillary, about the length of, or a little longer than the petioles, very slightly angular, smooth and obsoletely dotted with numerous minute dots, bibracteate about the middle. *Bractes* opposite or alternate, linearly subulate, a little thickened at the base. *Flower* nodding, upper and lower part white, the centre blue. *Calyx* of 5 sepals, which are lanceolate, acute, slightly appendaged at the base, smooth, slightly spreading, the margins a little membranaceous, upper one a little shorter than the others, which are nearly equal. *Petals* 5, unequal, the two upper ones obovate, reflexed from below the middle, lower part of a bright blue, the upper part white; two side ones oblong, obtuse, twisted, blue and striate at the base with white tips, on the upper side of each bearded with a tuft of short white hairs: lower one nearly double the size of the others, ovate, obtuse, concave, with a green nectariferous pit near the base, but producing no spur, of a bright purplish blue, striped with numerous small darker lines, the tip white. *Stamens* 5, the filaments membranaceous, fringed, and terminated beyond the anthers in a membranaceous point; *anthers* two-lobed, attached to the inside of the filaments, the lobes nearly straight. *Germen* bluntly three-sided, smooth. *Style* slender, smooth, twisted near the base, longer than the stamens. *Stigma* very small.

Our drawing of this curious and handsome flowering plant was made at the Garden belonging to the Apothecaries Company, at Chelsea, in July last; and a little plant that was given us by Mr. Anderson we planted in a warm border, where it is grown to a large tuft, throwing out numerous runners all around, and producing a great many flowers every day; it has also ripened seeds. Mr. Colvill has also raised plants of the same species from seeds sent by Mr. John Richardson, who collected them in New South Wales. In severe frost it will require to be covered with some dry litter or mats, or it may be preserved in pots in a frame or greenhouse, and it is readily increased by seeds, or by the runners from its roots. We have adopted the genus from M. Decandolle's Mss. in Mr. Lambert's Herbarium, where there are some other species of it, and many other species of this Natural Order, which were marked by M. Decandolle, but are not noticed in his Prodromus, so that he had probably lost the observations that he had made on them.

1. Calyx. 2. The 5 Petals, the two middle ones bearded on one side near the base with short hairs. 3. The 5 Stamens. 4. Germen terminated by the Style, which is a little twisted at the base, with an inconspicuous simple Stigma. 5. Capsule burst open, showing the seeds in two rows in each cell.

E. D. Smith del. Pub. by R. Sweet Sep. 1826 Weddell sc.

BLUMENBACHIA insignis.

Elegant Blumenbachia.

Natural Order. LOASEÆ. *Juss. ann. mus. 5. p. 21.*

BLUMENBACHIA. Calyx superus, profunde 5-partitus, persistens, laciniis æqualibus. *Petala* 5, limbo calycis inserta ipsoque longiora, longe unguiculata, medio auriculata, concava, æqualia, patentia. *Squamæ* 5, ibidem insertæ, cum petalis alternantes, integræ, dorso ad basin triaristatæ. *Stamina* numerosa, creberrima, perigyna; decem exteriora antheris destituta horumque bina squamis inclusa; reliqua longiora, disposita per fasciculos quinque, petalis oppositos. *Antheræ* erectæ, biloculares, loculis sulcatis, longitudinaliter dehiscentes. *Ovarium* inferum, subglobosum, tortuosum, 10-costatum. *Stylus* 1, erectus, pilosus, indivisus. *Capsula* subglobosa, tortuosa, 10-costata, limbo calycis coronata, 1-locularis, 5-valvis, polysperma. *Semina* oblonga, rugosa.—Herbæ *ramosæ, diffusæ, piloso-prurientes.* Folia *opposita, lobata, incisa, scabra.* Pedunculi *uniflori, axillares, solitarii.* Flores *cernui.* Petala *alba vel pallide flava.*

Blumenbachia insignis. *Schrader. News of Literature and Fashion, vol. 3. p. 268. Swt. hort. brit. addenda.*

Stem herbaceous, very much branched, and producing numerous shoots from the bottom: *branches* spreading in all directions, slightly quadrangular, thickly clothed with rigid bristles, which inflict a slight sting when touched, similar to that of a Nettle. *Leaves* opposite, petiolate, flat, deeply 3-lobed, the segments again lobed, divaricately spreading, acute, and toothed with unequal bluntish teeth, clothed on both sides with a short rough pubescence and some longer hairs intermixed, of a light green on the upper side and paler underneath. *Petioles* flattened and channelled on the upper side and convex on the lower, thinly clothed with stinging hairs and short down underneath. *Peduncles* axillary, solitary, 1-flowered, rather longer than the leaves, slightly angular, thickly clothed with a short pubescence and a few longer stinging hairs intermixed. *Flowers* nodding. *Bractes* 2, a little below the germen, opposite, small, lanceolate, pubescent, scarcely acute. *Germen* nearly globular, twisted, 10-furrowed, thickly clothed with long spreading hairs. *Calyx* crowning the germen, persistent, deeply 5-cleft, the segments lanceolate, divaricately spreading, sometimes toothed, very hairy and fringed. *Petals* 5, inserted in the base of the calyx, divaricately spreading, slipper-form, hollow, with a longish

unguis, about the middle are two ears, one on each side, spreading, acute, generally bifid, but sometimes simple, and at the point above the hollow is a sharp mucrone, slightly hooked, underneath and the whole back of the petal densely pubescent, with a few long, jointed hairs, seated on a sort of gland at the back. *Scales* 5, erect, enclosing the style, alternate with the petals, also inserted in the base of the calyx, ovate, entire rounded at the point, concave, the margins fringed, 3-ribbed at the back, and producing 3 hair-like aristas near the base, yellow with a reddish purple ring near the point, and the point also of the same colour. *Stamens* numerous, 10 *sterile ones* opposite to the scales, 2 of them enclosed in each, shorter than the fertile ones: *fertile ones* in 5 fascicles opposite to the petals, and enclosed in them before the bursting of the anthers, they then ascend and surround the style, passing between the 5 scales: *filaments* smooth, distinct to the base; *anthers* erect, 2-lobed, each lobe furrowed, which gives the appearance of being 4-celled in a young state. *Style* erect, simple, hairy, longer than the stamens. *Capsule* nearly globular, 8-ribbed, twisted, every alternate rib double the size of the other, 5-valved, the valves flat, and all meeting in the centre, many seeded. *Seeds* oblong, very rugged and uneven, of a dark brown colour.

Seeds of this curious and interesting plant were given to Mr. Colvill by Mr. Hunneman this Spring, and from a plant raised from them our drawing was taken in July last; it is a native of Chili, and has been named in compliment to the celebrated Naturalist, Professor Blumenbach; it is readily distinguished from all the other genera of the order by its 5-valved capsule, besides other distinctions; and in comparing it with *Loasa tricolor* of the Botanical Register, we perceived that was also a very distinct genus from LOASA, as constituted by Kunth, differing in several respects, particularly by its semisuperior capsule and large seeds. The present plant succeeds well as a hardy annual, either to be sown in a warm border, or in pots in a frame, and then to be planted in the open ground, thriving best in a rich light soil; it may also be increased by cuttings, which root readily, and it will probably survive as a perennial if protected in the greenhouse, or in frames, in Winter.

1. Germen terminated by the deeply 5-cleft Calyx. 2. Back view of one of the 5 Scales, to show the 3 ribs at the back. 3. Side view of the same, showing the 3 little bristle like appendages near the base. 4. Two of the barren Stamens, which are enclosed in one of the scales. 5. Stamens in 5 fascicles, which, before the bursting of the Anthers, are enclosed in the 5 petals; but as soon as the Anthers burst they become erect, and surround the style. 6. One of the Anthers detached, to show the 2 distinct lobes, with a channel down each. 7. Germen terminated by the undivided style. 8. Capsule divested of the outside, to show the 5 divisions, which are all distinct in the centre. 9. Seed.

Pub by R Sweet. Sep. 1826.

Waddell Jr

PAPAVER setigerum.

Bristle-pointed Poppy.

Natural Order. PAPAVERACEÆ. *DC. syst. veg. 2. p. 67.*

PAPAVER. Sepala 2, convexa, decidua. *Petala* 4. *Stamina* numerosa. *Stylus* 0. *Stigmata* 4-20, radiantia, sessilia super discum ovarium coronantem. *Capsula* oblonga obovata aut subglobosa, 1-locularis, è carpellis 4-20 in thalami productione membranaceâ inclusis constans, substigmatum coronâ valvulis brevibus dehiscens. *Placentæ* intervalvulares intùs in dissepimenta incompleta productæ. *Semina* reniformia striatula.—Herbæ *perennes aut annuæ, succo lacteo albo fœtæ, sæpius pilosæ.* Radices *simplices, fibrosæ.* Caules *teretes.* Folia *pinnatim lobata aut secta, lobis sæpiùs incisis, dentibus sæpè pilo terminatis.* Pedunculi *axillares, solitarii, uniflori, nudi, ante florescentiam apice inflexi.* Alabastra *ideò cernua ovata aut globosa, lævia aut setis pilosa.* Flores *erecti, albi rubri flavi aut variegati, facilè dupli et pleni, petalis tunc interdùm dentatis aut laceris.* DC. loc. cit.

§ II. Capsulis glabris (aut apice tantùm parcè pilosis).

P. *setigerum*, capsulis glabris obovatis, sepalis subsetosis, caule glabro paucifloro, foliis amplexicaulibus glaucis inciso-repandis, dentibus setâ terminatis. *DC. syst. veg. 2. p. 81. Prodr. 1. p. 119.*

Papaver setigerum. *DC. fl. fr. 5. p. 585. Deless. ic. sel. 2. t. 7. Spreng. syst. 2. p. 570. Swt. hort. brit. p. 16.*

Root annual, slenderly fusiform, and tapering to a long slender point, producing a few small fibres. *Stem* erect, from 18 inches to 2 feet high, not much branched, slightly angular, quite smooth, but slightly glaucous. *Leaves* oblong, or oblongly lanceolate, acute, very slightly glaucous, or of a light green colour, clasping the stem at the base, more or less deeply and sharply cut and repandly toothed, the teeth slightly cartilaginous at the points, and all terminated by a rigid bristle

like hair; underneath strongly nerved, the nerves clothed irregularly with rigid hairs: segments or lobes acute, the margins slightly revolute. *Peduncles* long and slender, cylindrical, producing a few bristle like hairs here and there. *Calyx* of two sepals, which are convex or concave inwards, with membranaceous margins; striate or slightly furrowed, naked at the base, but clothed above half way with rigid bristles, that are widened at the base, and taper to a slender point. *Petals* 4, broadly obovate, the margins slightly notched, very much imbricate, and cupped; the two outer ones about double the size of the inner ones, of a blush or pale flesh colour, lightest upwards, very much lined or striate, all having a large oblong or obovate dark purple patch at the base. *Stamens* numerous, spreading: *filaments* smooth, dark purple: *pollen* pale yellow. *Germen* obovate. *Stigma* sessile, 6 to 9-rayed.

Seeds of this pretty species of Poppy were presented to Mr. Colvill the year before last, with several other sorts of curious seeds by Lady Whitshed, who had received them from Gibraltar; a very good engraving of the same species is published in Delessert's Icones selectæ; it is readily distinguished from P. *somniferum*, the only species with which it is likely to be confounded, by its greener leaves, the points and teeth of which are terminated by long setæ, and also by its much smaller capsules; it is a very hardy annual, and only requires to be sown in the open borders early in Spring. The richer the soil is the stronger it will grow, and the size of the flowers will also vary according to the situation in which it is grown.

1. Calyx, to show the bristly sepals. 2. Some of the Stamens, to show their insertion, and the unequal length of the filaments. 3. Ripe Capsule, showing the 8-rayed crown, and also the difference of size between it and P. *somniferum*.

E.D.Smith Del. Pub by S.Sweet Oct 1826 Wedderld.Sc.

PAPAVER horridum.

Prickly-stalked Poppy.

Natural Order. PAPAVERACEÆ. *DC. syst.* 2. *p.* 67.
PAPAVER. Supra, fol. 172.
§ II. *Capsulis glabris (aut apice tantùm parcè pilosis).*

P. *horridum*, capsulis glabris ellipsoideis, sepalis hispidis, caule paucifloro setis rigidis hispidissimo, foliis subamplexicaulibus glaucis sinuato-pinnatifidis lobulis apice et in nervis setigeris. *DC. syst. veg.* 2. *p.* 79. *Prodr. syst. veg.* 1. *p.* 119.
Papaver horridum. *Spreng. syst. v.* 2. *p.* 570. *Swt. hort. brit. addenda.*

Annual. Stem erect, from a foot to 18 inches in height, much branched, of a glaucous colour, irregularly clothed with strong rigid prickle like setæ, some of which are strong enough to enter the fingers, amongst those are other smaller and weaker ones: *setæ* straight, horizontally spreading; *young branches* more thickly beset with bristles. *Leaves* oblong, deeply sinuate or pinnatifid, of a light green, slightly glaucous: *lobes* unequally more or less cut and toothed, the teeth and segments terminated with sharp rigid bristles, the nerves at the back of the leaves are also thickly but irregularly beset with straight rigid bristles. *Root-leaves* petiolate, pinnatifid: *stem ones* distant, sessile, clasping the stem at the base, deeply sinuate. *Peduncles* terminal and axillary, elongated, cylindrical, glaucous, less setose than the stems, and the setæ weaker. *Calyx* of 2 sepals, ovate, densely clothed with innumerable softer bristles: *sepals* deciduous. *Petals* 4 to 6, obovate, crumpled, of a very thin texture, of a light orange colour. *Stamens* 40 to 50, about the length of the germen: *filaments* slender, smooth: *pollen* pale

yellow. *Germen* elliptical, 8-channelled, dark green, smooth. *Capsule* obovate. *Stigma* sessile, 7 or 8-rayed, the rays slightly fimbriate.

Our drawing of this singular plant was taken at the Nursery of Messrs. Whitley, Brames, and Milne, in July last; it was raised by them from seeds that had been received from New South Wales; we only knew the plant before by M. Decandolle's description, and had even heard it doubted whether there was such a plant native of New Holland; so that we were very much gratified by seeing it in flower. It is a hardy annual plant, and only requires to be sown in the open ground, and to be kept clear of weeds. Seeds of it ripen in abundance, so that it may soon become plentiful.

1. The Calyx of two Sepals, which drop off when the flower opens. 2. A portion of the Stamens. 3. Capsule terminated by an 8-rayed sessile Stigma.

E. D. Smith del.

Pub by R. Sweet

Weddell sc.

VIOLA lanceolata.

Spear-leaved Violet.

Natural Order. VIOLARIEÆ. *DC. prodr.* 1. *p.* 287.
VIOLA. Supra, fol. 69.

Sect. I. *NOMIMIUM. Stigma* rostratum, foraminulo ad extremitatem rostri sito; rostrum plùs minùs recurvum, nunc deorsùm marginatum et tunc planiusculum et obliquum, nunc absque margine et tunc deorsùm convexiusculum. *Stylus* ab apice ad basin attenuatus. *Stamina* oblonga approximata. *Torus* planiusculus. *Capsula* sæpiùs trigona. *Semina* 15-27. *Folia seminalia* sæpe obovata vel oblonga.

§ *Stigmatibus apice depressis, aut deorsùm in orbem marginatis, caulibus subnullis.*

** *Radicibus rugosis plus minùs lignosis et ramosis.* DC. prodr. 1. p. 292.

V. *lanceolata,* stolonifera, stigmate marginato rostrato, foliis lanceolatis utrinque attenuatis serrulatis glabris, stipulis liberis, sepalis lanceolatis acutis, petalis superioribus rotundatis reflexis: 2 lateralibus barbatis: inferiora multistriata.

Viola lanceolata. *DC. prodr.* 1. *p.* 293. *Rœm. et Schult. syst.* 5. *p.* 354. *Spreng. syst. veg.* 1. *p.* 798. *Mich. fl. amer.* 2. *p.* 150. *Pursh. Amer. sept.* 1. *p.* 172. *Nutt. gen. amer.* 1. *p.* 150. *Forst. in Linn. trans.* 6. *p.* 310. *Lodd. bot. cab. t.* 211.

Stem short and fleshy, producing a few short and thick rugged branches, and throwing out runners underneath the ground, which extend themselves, and produce young plants. *Leaves* variable in breadth, narrowly or broadly lanceolate, or sometimes nearly elliptic, acute, attenuated at the base and down the petiole, slightly serrulate, the teeth curved inwards, and close pressed to the leaf, smooth on both sides, minutely punctate, strongly and numerously nerved underneath. *Petioles* long and slender, slightly winged, flat on the upper side and convex underneath, more or less dotted with smallish pale red specks. *Flowers* numerous, white, striped with dark purple, without scent. *Peduncles* about the length of the leaves, bluntly quadrangular, furrowed, smooth, also marked with numerous pale red spots, and producing two lanceolate taper-pointed bractes about the middle; those on some

are opposite, on others they are at a little distance from each other, and are alternate. *Sepals* 5, lanceolate, acute, nearly equal, eared at the base. *Petals* 5, the two upper ones broadly ovate, rounded, and reflexed, quite white with a green unguis, smooth: two side ones bearded near the base with short transparent hairs, and marked with 2 or 3 dark purple stripes: lower one spathulate, concave, producing a short hollow blunt spur at the base, quite smooth, white, but elegantly striped with numerous dark purple branching lines. *Stamens* 5. *Germen* slightly pubescent. *Style* smooth, very slender at the base, thickening upwards and ascending. *Stigma* margined and rostrate.

We believe that there is more than one species of American Violet confused under the name of V. *lanceolata* by different Botanical writers, and we also believe that we have seen two very different plants in the collections of this country, that have both been cultivated for V. *lanceolata*, but we have not had an opportunity of comparing them; the plants that were brought from America by Mr. Lyon about the year 1811 or 12 were much slenderer in all their parts, their leaves were longer and narrower, and the flowers of a clearer white, but we cannot say whether the petals were bearded or not; those of our present subject are decidedly so, as they are described by some authors, while others describe them as quite smooth; we suspect that they are both right, but intend different species, that are much alike, and have been confused. Should any of our Subscribers possess the smooth petaled plant, we should very much like to publish a figure of it; the Siberian plant is already ranked as a distinct species by Rœmer and Schultes, and also by Decandolle, under the name of V. *Gmeliniana*. The present plant thrives well in peat soil, and flowers freely when grown in a pot, and it may be increased by dividing at the root, or by seeds, which ripen in abundance.

Drawn at Mr. Colvill's Nursery, in June last.

1. Calyx. 2. The 5 Petals, the 2 side ones bearded, and the lower one ending in a blunt hollow spur at the base. 3. The 5 Stamens, showing the two lobed anthers, and the membranaceous point of the filament terminated above them. 4. Germen, slightly pubescent, terminated by a smooth Style, and a margined rostrate Stigma.

E.D. Smith Del. Pub. by R. Sweet. Oct 1826. Weddell sc.

COREOPSIS grandiflora.

Large-flowered Coreopsis.

Natural Order. COMPOSITÆ. *Adanson fam.* 2. 103.
Sect. V. *HELIANTHEÆ.* Kunth Synops. 2. p. 463.
COREOPSIS. Supra, fol. 10.

C. *grandiflora,* caule erecto ramoso sulcato, foliis oppositis subsessilibus glabris basi ciliatis: caulinis inferioribus biternatis: superioribus ternatis v. tripartitis; foliolis linearibus elongatis integerrimis supra canaliculatis, pedunculis elongatis unifloris, foliolis involucri exterioribus membranaceo-marginatis ciliatis, radiis 5-dentatis.
Coreopsis grandiflora. *Hogg. Mss.*

A hardy perennial plant, 3 or 4 feet in height, erect, branching; *branches* smooth and glossy, striate or furrowed with numerous shallow longitudinal furrows. *Root leaves* not seen: *stem ones* opposite, nearly sessile, connate, smooth, fringed at the base with long white hairs: *lower ones* twice ternate, the three first pair of leaflets, proceeding from near the base, each of those again ternate or 3-parted; *upper ones* simply ternate: *leaflets* or *segments* fleshy, linear, elongated, entire, with a sharpish brown point, channelled on the upper side and keeled underneath, divaricately spreading. *Peduncles* long, 1-flowered, also furrowed with numerous shallow channels. *Flowers* large, of an entire bright yellow. *Involucre* of 2 series: the outer one varying with from 8 to 9 spreading leaflets, which are narrowly lanceolate, broader at the base and tapering to a slender point, the margins membranaceous and fringed: inner one of 8 leaflets, which are smooth, ovate, acute, closely imbricate, and surround the florets, the points tinged with yellow, and purplish margins. *Receptacle* convex, warted, paleaceous: *chaff* filiform, broadest at the base, about the length of the florets when

expanded, deciduous. *Rays* very large and spreading, imbricate, obovate, deeply and unequally 5-toothed, sterile. *Florets of the disk* tubular, funnel-shaped, 5-toothed, hermaphrodite; nerves alternating with the teeth. *Stamens* 5: *filaments* distinct, slender: *anthers* connected into a tube, naked: *pollen* bright yellow. *Style* smooth, exserted. *Stigmas* 2, revolute, fimbriate. *Seeds* oblong, flattened, slightly keeled, smooth. *Pappus* of two short crested teeth.

We are obliged to the kindness of Robert Barclay, Esq. of Bury-hill, near Dorking, for the specimen from which our drawing was made; it flowered in his splendid collection in August last, and had been received the Spring of the present year from North America, sent by Mr. Hogg from New York as a new species, under the name that we have adopted; it is certainly a very different plant from any that we find described, and makes a fine Autumn flowering plant for the flower garden, thriving well in the common garden soil, and attaining to the height of two to four feet, according to the soil and situation in which it is grown; it may be increased by dividing the root, or by seeds; or cuttings planted in a shady situation will strike root readily.

In Professor Sprengel's third Volume of the Systema Vegetabilium, we observe that he has adopted the genus Calliopsis of Reichenbach, which we gave as a synonym to *Coreopsis tinctoria;* to it he also refers C. *rosea*, *nudata*, and *palmata* of Nuttall; the genus is only distinguished from Coreopsis by its naked seed.

1. The Involucre, showing the double set of leaflets. 2. Receptacle divided, to show the convex surface, and the chaff between the florets, which are taken out. 3. One of the scales of chaff. 4. Floret spread open, to show the nerves alternating with the teeth. 5. Inside view of the same, showing the 5 connected anthers and distinct filaments. 6. Seed, with its 2 crested teeth, terminated by the Style, and two revolute Stigmas. 7. Seed of the ray.

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CYCLAMEN europæum.

Sweet-scented European Cyclamen.

Natural Order. PRIMULACEÆ. *Brown prodr.* 427.
CYCLAMEN. Supra, fol. 9.

C. *europæum,* foliis orbiculatis cordatis crenatis denticulatisve, laciniis corollæ lanceolatis. *Rœm. et Schult. syst. v.* 4. *p.* 129.
Cyclamen europæum. *Spreng. syst. veg.* 1. *p.* 572. *Willden. sp. pl.* 1. *p.* 809. *Jacq. aust.* 5. *p.* 1. *t.* 401. *Pers. syn.* 1. *p.* 171. *Hort. Kew. ed.* 2. *v.* 1. *p.* 311.

Root tuberous, solid, rough, and rugged, of a largish size, producing short rugged stems, from which spring the leaves and flowers. ***Leaves*** nearly orbicular, cordate or reniform, bluntish, nearly closed at the base, by being overlapped, crenate, or toothed with short but unequal horny teeth, smooth on both sides, upper side of a dull green, with a large white interrupted circle round it, underneath of a glossy reddish purple, strongly 3-nerved from the base, the nerves branched. ***Petioles*** shorter than the peduncles, nearly cylindrical, but slightly furrowed on the upper side, of a rusty red colour, clothed with a very short rusty pubescence. ***Peduncles*** erect, rather thickest at the base, and slightly tapering upwards, cylindrical, of a brown red colour, thickly clothed with very short rusty down. ***Flower*** nodding, delightfully fragrant, pale rose-coloured or lilac, redder at the mouth. ***Calyx*** campanulate, deeply 5-cleft, clothed with a rough rusty pubescence, segments spreading, broadly ovate, keeled, bluntish, spotted with numerous minute brown spots, rugged. ***Corolla*** deeply 5-cleft, with a short broad inflated tube, and a large open mouth; ***segments*** all reflexed, long, broadly lanceolate, more or less twisted, bluntish or scarcely acute, and longitudinally lined with numerous

faint lines. *Stamens* 5, inserted in the base of the tube, and scarcely reaching half way to the mouth: *filaments* very short, scarcely any, inserted in the base of the anthers: *anthers* broad at the base and tapering to the point, connivent, two-lobed, bursting at the point to emit the pollen, which is of a pale yellow. *Germen* downy. *Style* exserted beyond the mouth, thickest and slightly hairy at the base, and tapering and quite smooth upwards. *Stigma* a small dark obsolete point.

Our drawing of this delightfully fragrant species was taken from a fine plant sent to us in full bloom from the Nursery of Mr. Joseph Knight in the King's-road, in August last; at the time we received it, there were ten elegant full blown flowers on it, besides some buds, the fragrance of which exceeds almost every other plant with which we are acquainted, as it is so very agreeable as well as powerful; we had been long wishing to see the C. *europæum*, which we only knew by Jacquin's figure, the plant sold by that name at the nurseries being nothing but the British *hederæfolium*, of which there are several varieties in the form of their leaves; it also varies with white, and flesh-coloured flowers. This genus, it is hoped, will soon get better understood, as we believe all the described species of it, and some others, are now in the collections of this country. Mr. Knight received the present plant from Hungary, and bulbs of it have been received in other collections from Switzerland; it succeeds best in a light sandy soil, and may either be grown in pots, or in a dry warm border, as the roots will be liable to be injured if too much wet remains about them; growing them in pots is the most convenient method, as they can then be removed into the house when in flower; like the other species, it may be increased by seeds, which will ripen plentifully with care.

1. Calyx. 2. The tube of the Corolla spread open, to show the insertion of the Stamens, and their length. 3. Germen terminated by the Style, which is hairy at the base, and smooth upwards.

F D Smith Del.

Pub by R Sweet Nov. 1826.

Weddell Sc

GAGEA glauca.

Glaucous-leaved Gagea.

Natural Order. ASPHODELEÆ. *Brown prodr.* 1. *p.* 274.
GAGEA. Supra, fol. 158.

G. *glauca*, folio radicali unico lineari-lanceolato trinervio canaliculato revoluto glauco: floralibus oppositis lanceolatis marginibus incurvis ciliatis glauco-pubescentibus, scapo triquetro, umbella subquadriflora, pedicellis acute triquetris, perianthii foliolis ovatis obtusis.
Gagea glauca. *Swt. hort. brit. p.* 418.
Ornithogalum sylvaticum. *Schleicher, non Pers.*
Ornithogalum luteum. *Willd. enum.* 1. *p.* 367. *Link enum.* 1. *p.* 325. *non Linn.*

Bulb small, of a glossy white colour, but clothed with a brown shell. ***Leaf at the root*** solitary, glaucous, revolute, linearly lanceolate, acute, strongly 3-nerved, flat, but slightly channelled on the upper side, narrowing to the base, nearly three times the length of the scape in our specimens. ***Leaves on the scape*** opposite, lanceolate, acute, sharply keeled, glaucous, pubescent, and fringed with long hairs, the margins curved inwards; outer one more than double the size of the other. ***Scape*** short, sharply three-sided. ***Umbel*** about 4-flowered. ***Pedicles*** unequal in length, sharply triquetrous, smooth but glaucous. ***Perianthium*** deeply 6-parted, of a pale yellow, the segments stellately spreading, outer ones broadly ovate, obtuse, inner ones scarcely half the width; remaining persistent, and changing to a grey or glaucous green colour, outside much striped. ***Stamens*** 6, inserted in the base of the perianthium, below the segments: ***filaments*** narrow, flat, smooth, tapering upwards, and inserted in the

base of the anthers. *Germen* triquetrous. *Style* triquetrous, longer than the stamens. *Stigma* 3-lobed, fimbriate.

Several bulbs of this pretty species were sent to Mr. Colvill last Autumn, from Switzerland, where they were collected by Mr. Schleicher, who sent them under the name of *Ornithogalum sylvaticum*, but they are very different from the O. *sylvaticum* of Persoon; but we believe there can be no doubt but it is the O. *luteum* of Willdenow's and also of Link's Enumeratio, but very different from O. *luteum* of Linnæus, which is the species we have already published: we have therefore given the present plant a name, that will at once distinguish it from all others with which we are acquainted; as it is a very early flowering plant, it is very desirable to grow in the flower borders in tufts, intermixed with the different species of Snowdrops and Crocus, that are in bloom at the same time.

Our drawing was taken at the Nursery of Mr. Colvill, the latter end of last March, it being the first species of the genus that came into bloom: it is quite hardy, and will thrive well in any light soil, and may be increased by seeds, or by offsets from the bulbs.

1. The 6 segments of the Perianthium spread open, to show the difference in their size. 2. Base of the Perianthium divested of its segments, to show the insertion of the Stamens. 3. The triquetrous Germen, terminated by the Style and 3-lobed fimbriate Stigma.

E.Dimich del.

Pub. by E. Jacob. Oct. 1876

Weddell sc.

HOMERIA lineata.

Lined-leaved Homeria.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.
HOMERIA. Supra, fol. 152.

H. *lineata*, bulbis cartilagineo-fibrosis: fibris apicè rigidis spinescentibus vaginantibus, foliis glaucescentibus margine incurvis scapo ramoso longioribus, spathis multifloris elongatis, segmentis perianthii acutis: exterioribus majoribus.
Homeria lineata. *Swt. hort. brit. p.* 395.

Root a bulb-tuber, clothed with a hard cartilagineo-fibrous coat, which terminates in numerous long rigid awl-shaped horny bristles that encircle the leaves and scape. *Leaves* several, about a yard in length, broadly linear, acute, of a stiff coriaceous texture, the points bent downwards, longer than the scape, the margins curved inwards, so as to be hollow in the centre, of a dark green, but slightly glaucous, with a strong white line in the centre, from the base to the point, and strongly marked with numerous other green lines or nerves, which are prominent at the back, and furrowed on the inside. *Scape* branched, sheathed with the leaves, above two feet in length, bluntly angular, smooth and glossy. *Spatha* very long, 2-valved, many flowered, each valve slightly keeled, smooth and glaucescent: outer valve shortest, and ending in a long taper-pointed sphacelate point: inner one broader, enclosing the flowers before expansion, and terminated in a membranaceous lacerate point, divided into numerous taper-pointed segments. *Flowers* coming in succession for a long time, expanding in the morning and closing at night, of a delicate light copper colour. *Peduncles* slender, triangular, scarcely extending beyond the sheaths. *Germen* about half an inch in length, below the flower, triangular and 3-furrowed, glandularly pubescent. *Perianthium* spreading, 6-parted, the seg-

ments petal-like, acute, unguiculate, scarcely joined at the base, with a green vein down the centre of each, and near the base is a yellow spade-like mark, spotted with numerous small green specks. *Stamens* 3, the filaments all connected in a long tube, becoming slenderer upwards, densely clothed with short villous glandular hairs, and producing 3 transparent eye-like glands near the base of the tube: *anthers* about the height of the stigmas, which they surround: *pollen* yellow. *Style* smooth. *Stigma* 3-cleft, the segments short, bifid, fimbriate, and slightly recurved.

This handsome and very distinct species, is one of those already mentioned by us as being brought from the Cape by Mr. Synnot, and flowered at the Nursery of Mr. Colvill, last Autumn; we believe it to be a very scarce bulb, as only two have flowered, which we believe are the only ones of the sort in his collection; but there are several other very fine species in the same collection, that were brought at the same time; the present species is readily known by its tall stem, and long coriaceous leaves with a white stripe down their centre; the segments of the perianthium are also different in form from any other; we believe the species will be as numerous as those which will come under MORÆA.

Like the rest of the Cape bulbs, the present species should be planted in a light sandy soil; and if grown in the open ground, will need to be well covered in frosty weather; or its bulbs may be taken up in Autumn, and kept dry, and out of the reach of frost, until the next Spring, when it may be planted the latter end of March or beginning of April, according as the weather suits; or if grown in pits or frames, it will only need covering in severe frost: it will also succeed very well in pots, to be planted in October, and to remain in frames all the Winter; a mixture of loam, peat, and sand, will suit it best.

1. The glandularly pubescent Germen, with the Perianthium taken off, to show the 3 Stamens, all connected into a tube, and enclosing the Style. 2. The same, divested of the Stamens, and terminated by the smooth Style, and 3-cleft Stigma, the segments short and bifid.

E.D. Smith Del. Pub. by R. Sweet Nov. 1826. Wedekeld sc.

LACHENALIA anguinea.

Snake-leaved Lachenalia.

Natural Order. ASPHODELEÆ. *Brown prodr.* 1. *p.* 274.

Div. III. Flores spicati. Radix bulbosa. Perianthium basi tubulosum.

LACHENALIA. Perianthium inferum, sexdivisum, oblato-v. cylindrico-campanulatum: *laciniis* 3 *exterioribus* brevioribus oblongis calycino-conniventibus carunculâ externâ infra apicem: *interioribus* 3 alternis suprà rotundato-dilatatis patulis. *Filamenta* basi laciniarum perianthii inserta, subassurgentia: *antheræ* incumbentes. *Stylus* subassurgentèr porrectus: *stigma* simplex. *Capsula* membranosa, subtrilobo-trigona, 3-locularis, 3-valvis: valvis medio septiferis. *Semina* biseriata, plura in loculo globosa.—Bulbus *tunicatus*; folia 1-*plurima, ambientia, subcarnosa, tenera, linearia ad lato-ovata.* Scapus *carnosus.* Flores *erecto-spicati v. racemosi, undìque sparsi.*

L. *anguinea*, floribus campanulatis pedunculatis cernuis, perianthii foliolis subæqualibus: interioribus basi angustatis distinctis: exterioribus basi connatis, staminibus exsertis adscendentibus, folio solitario elongato-lanceolato margine incurvo basi vaginantia subtus fasciato.

Lachenalia anguinea. *Swt. hort. brit. p.* 420. *n.* 21.

Bulb small, flattish, producing only one leaf. *Leaf* lanceolate, acute, elongated, sheathing at the base, the margins bending inwards, a little pustulose, glossy, inside of a pale green, the outside beautifully variegated with lines and patches of dark green, or light purple and white, which gives it the appearance of a snake. *Scape* about the length of, or scarcely so long as the leaf, cylindrical, slightly powdery, the lower part more or less variegated with brown, angular from where the flowers proceed. *Flowers* bell-shaped, nodding, white, tipped with green, in a terminal many-flowered loose raceme. *Bracte* 1 at the base of each peduncle, small, broad at the base, but terminating in a long membranaceous taper point. *Peduncles* more than double the

length of the flowers, white and transparent. *Perianthium* nearly equal, the three inner leaflets distinct to the base, rather shortest and smallest, narrow at the base with a dilated point, 3 outer ones connected nearly half their length, the points slightly curved inwards, tipped with a brownish green spot. *Stamens* 6, inserted in the base of the perianthium, and exserted far beyond the mouth, their points ascending, and the lower ones longest: *filaments* smooth and glossy, inserted in the back of the anthers, gradually tapering upwards, about twice the length of the perianthium; *anthers* 2-celled; *pollen* pale yellow. *Ovarium* triangular, 3-celled. *Style* smooth, about the length of the stamens, also ascending. *Stigma* a simple point.

This singular plant is another of the rarities that were brought from the Cape by Mr. Synnot, last Summer, and flowered this Spring at the Nursery of Mr. Colvill, where our drawing was made; the shape of the leaves, and the patches at their back, immediately give the idea of some species of Snake.

This species, and all the others of the genus, many of which are very beautiful, will succeed well, if planted out in a warm border, composed of a light sandy soil; the bulbs may be taken up in Autumn; or if left in the ground, they will need to be well covered in severe frosts; they will also thrive well in pits or frames, planted in a mixture of loam, peat, and sand, requiring to be covered only in severe frosty weather; they will also succeed well in pots, letting the mould get quite dry after they have done flowering, or the bulbs will be apt to rot; just before they begin to grow afresh, they should have all the old dry mould shook from them, and must be potted in fresh sandy soil, when they will soon make young roots, and will then require a supply of water; any that show flower may be removed to an airy part of a Greenhouse, the others may remain in frames all the Winter, but will require to be covered in frosty weather.

1. The Bulb. 2. The 6 Segments of the Perianthium, with the Stamens inserted in the base. 3. The triangular Germen, terminated by a smooth slender Style and small simple Stigma.

E.D.Smith.Del. Pub.by B.Sweet Nov.1826. Waddell.sc

STACHYS angustifolia.

Slender-leaved Hedge-Nettle.

Natural Order. LABIATÆ. *Brown prodr.* 499.
Sect. III. Stamina 4 fertilia. Corolla bilabiata. Calyx 5-fidus.
STACHYS. Supra, fol. 100.

S. *angustifolia*, herbacea glabra, ramis virgatis diffusis, foliis linearibus infimis pinnatifidis, floribus geminis pedunculatis remotis. *Spreng. syst. veg.* 2. *p.* 733.
Stachys angustifolia. *Marsch. Bieb. taur. cauc.* 1. 52. *Steud. nomen.* 1. *p.* 806. *Spreng. syst. veg.* 2. *p.* 733. *Swt. hort. brit.* 320.
Stachys tenuifolia. *Pallas. Link. enum.* 2. *p.* 109. *non Willden.*

Herbaceous. Stem smooth, branching, bluntly 4-sided, from a foot to 18 inches in height, purple near the bottom: *branches* opposite, spreading or erect, smooth and glossy. *Leaves* opposite, linear, scarcely acute, rather succulent, a little attenuated at the base: lower ones pinnatifid, the segments distant, linear, spreading; others irregularly toothed: upper ones shorter and entire. *Racemes* long, the flowers in pairs, opposite to each other, distant. *Pedicles* short, clothed with short hairs. *Calyx* equal, campanulate, at last nearly globular, 10-ribbed, very rough, occasioned by small stiff hairs that are seated on small warts or tubercles, 5-toothed, the teeth spreading with very sharp points. *Corolla* 2-lipped, hairy: *upper lip* of a reddish purple, with a dark purple stripe on each side, slightly emarginate, reflexed a little: *lower lip* 3-lobed, side lobes short, slightly reflexed, middle one broad and flat, rounded, of a pale blush. *Stamens* 4, inserted in the tube, 2 a little longer than the others: *filaments*

flat, pubescent: *anthers* 2-lobed, attached to the filaments by their back. *Style* smooth. *Stigma* bifid, the points equal. *Seeds* 4, smooth and glossy.

A very pretty hardy herbaceous plant, native of Tauria, and succeeds well in the open borders, where it will continue to bloom from July to the end of September, thriving well in the common garden soil; it will also succeed well in a pot, or on rock-work, to the latter of which it is well adapted; it strikes readily from cuttings, planted in a shady situation, or it may be raised from seeds, which ripen plentifully.

Our drawing was taken from a fine plant sent to us in full bloom this Summer, from the Nursery of Messrs. Charles and James Young, of Epsom in Surry, a Nursery that is very rich in herbaceous plants, and where they thrive with much luxuriance, some fine specimens of which we hope to publish in some of our future numbers.

1. Calyx, showing the 5 sharp teeth, and the two small bractes at the base of the footstalk. 2. Corolla spread open, to show the insertion of the four Stamens. 3. The 4 Seeds, terminated by the Style and cleft Stigma.

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D. Smith Del. Pub. by R. Sweet Dec 1826. Weddell Sc.

CALYSTEGIA reniformis.

Kidney-leaved Calystegia.

Natural Order. CONVOLVULACEÆ. *Brown prodr. p.* 481.

CALYSTEGIA. Calyx 5-partitus; *bracteis* duabus foliaceis inclusus. *Corolla* campanulata, 5-plicata. *Stamina* subæqualia, limbo breviora. *Ovarium* semibiloculare, 4-spermum. *Stylus* indivisus. *Stigmata* 2, obtusa, (teretia v. globosa). *Capsula* unilocularis.—Herbæ *lactescentes, glabræ, volubiles v. prostratæ, (extra tropicum provenientes).* Pedunculi *solitarii, uniflori.* Brown prodr. p. 483.

C. *reniformis*, caule angulato ramoso elongato prostrato, foliis reniformibus subrepandis emarginatis crassiusculis, pedunculis teretiusculis, bracteis cordatis emarginatis calyce parum brevioribus, radice repente.

Calystegia reniformis. *Brown prodr. p.* 484. *Rœm. et Schult. syst.* 4. *p.* 185. *Swt. hort. brit. p.* 287. *Colv. catal. ed.* 2. *p.* 34.

Convolvulus reniformis. *Spreng. syst. veg. v.* 1. *p.* 609. *n.* 272.

Roots perennial, succulent, branching in all directions, and extending a great way round, when grown in light soil. *Stems* milky, numerous, spreading flat on the ground, and extending to a great length, branching in all directions; angular, which is occasioned by the footstalks of the leaves being decurrent down the stem, roughish, and more or less tinged with a reddish purple; the angles a little undulate, particularly near the joints. *Leaves* kidney-shaped, emarginate, slightly repand, rather succulent, smooth on both sides, underneath many nerved, the nerves branched, the nick terminated in a short point. *Petioles* broad, shorter than the peduncles, flattened, and deeply furrowed on the upper side, and convex underneath; roughish, but not pubescent. *Peduncles* axillary, solitary, 1-flowered, roundish, or slightly angular, smooth. *Bractes* 2, enclosing the calyx, scarcely as long, cordate, broadly but shallowly emarginate. *Calyx* deeply 5-parted, segments broadly ovate, outer ones

broadest and blunt, inner ones terminated bluntly into a short point. *Corolla* campanulate, limb 5-lobed, spreading, of a bright flesh colour, with a white stripe in each. *Stamens* 5, inserted in the tube; *filaments* broadest at the base, glandularly pubescent, the upper part smooth; *anthers* sagittate. *Style* quite smooth, longer than the stamens. *Stigmas* 2, oblong, blunt, very rugged.

This beautiful plant, so nearly related to the C. *Soldanella* of our own country, is a native of the shores of New Holland; the plant from which our drawing was made, was raised from seeds in 1822, at the Nursery of Mr. Colvill; the seeds were given to him by E. Barnard, Esq., with seeds of many other curious plants; it stands well in the open borders, except in very severe Winters, such as the last, when all the plants that were not covered were killed by the frost; so that, in severe weather, they should be covered with a little loose dung, or litter of any kind, that will keep the frost from the roots; or some plants may be preserved in frames through the Winter, and turned out in the borders in Spring; it is a desirable plant for covering a naked bank in Summer, as its branches lay flat on the ground, are very numerous, and extend to a great length; it is readily increased by dividing the roots. Drawn at the Nursery of Mr. Colvill, in August, 1825.

So many beautiful plants from New Holland having been lately introduced, the whole of which are the most desirable plants for a Greenhouse or Conservatory, and many of them may be grown in the open air, so as to be protected with a covering in Winter; that we have it in contemplation to publish a periodical work entirely on New Holland plants, with figures and descriptions, and the best method of cultivating each particular species; so that Ladies or Gentlemen may select from the work the plants that they most admire; and, at the same time, may be acquainted with the right method of cultivating them.

1. The two Bractes at the base of the Calyx. 2. The Calyx, showing the 5 blunt segments. 3. Corolla spread open, divested of the upper part, showing the insertion of the 5 Stamens; the filaments dilated at the base, where they are glandularly pubescent. 4. Style, terminated by two oblong blunt rugged Stigmas.

E. D. Smith Del.

Pub. by R. Sweet Dec. 1826

Weddell Sc.

POLEMONIUM sibiricum.

Bipinnate-leaved Greek Valerian.

Natural Order. POLEMONIACEÆ. *D. Don in Edinb. phil. journ. Oct.* 1822.

POLEMONIUM. Calyx campanulatus, 5-fidus. *Corolla* rotata, limbo 5-loba, erecta. *Stamina* in fauce inserta: *filamenta* basi barbata, in annulam contigua et faucem ferè claudentia. *Capsula* subrotunda: loculis polyspermis: valvis membranaceo-crustaceis. *Semina* oblonga, subtrigona, albumine magno prædita. *Radicula* cotyledonibus duplo longior!—Herbæ *perennes* (*Amer. bor. Europ. et Sibir.*) Folia *alterna, impari-pinnata aut rariùs* (*in* P. sibirico) *bipinnata:* foliolis *integerrimis.* Flores *numerosi in corymbus pluribus paniculatim digesti, pulchri, cærulei vel rarius albi.* D. Don. l. c. p. 5.

P. *sibiricum*, foliis bipinnatis pubescentibus: foliolis lineari-lanceolatis acutis, corymbis paniculatis congestis, calycibus villosis, laciniis corollæ lato-ovatis acutis.

Polemonium sibiricum. *D. Don. loc. cit. p.* 5. *Swt. hort. brit. p.* 285.

Perennial, herbaceous. *Stems* several from the same plant, erect, from a foot to 18 inches in height; pubescent when young, but becoming smooth, angular. *Leaves* pinnate, hairy when young, but becoming smooth afterwards; *leaflets* opposite or alternate, crowded, variable, pinnate or pinnatifid, with long naked footstalks; lower ones broader, generally simple, or 2 or 3-cleft; *the leaflets or segments* linearly lanceolate, acute, generally entire, but sometimes forked. *Petioles* deeply channelled on the upper side, and keeled on the lower; widened near the base, and continuing with a slight wing on each side down the stem, pubescent. *Flowers* white, terminating the stem in a crowded panicle. *Peduncles* in a close corymbus. *Pedicles* short, crowded, and clothed

with short unequal hairs. *Calyx* 5-cleft, campanulate when the flower is expanded, afterwards becoming urceolate, clothed with short villous hairs; segments lanceolate, scarcely acute, remaining persistent, and enclosing the capsule. *Corolla* rotate, tube shorter than the calyx; limb 5-cleft, the segments very broadly ovate, acute, imbricate. *Stamens* 5, inserted in the tube about half way down; *filaments* slender, widened and bearded at the base, attached to the back of the anthers a little above the base; *anthers* sagittate, 2-lobed. *Germen* smooth and glossy. *Style* smooth, slender, exserted. *Stigmas* in some flowers 2-cleft, and in others 3-cleft, the segments reflexed.

We do not find any account of the present plant, except in the work above quoted by Mr. Don; nor had we ever noticed it in any collection, until we saw it in flower at the Nursery of Mr. Mackay, in the King's-road, where our drawing was made in August last; but Mr. Don informs us, that it was cultivated in his father's garden a great many years back, and from that stock we believe the whole of the plants now in the country have been produced. It is readily distinguished, at first sight, from all the other species by its compound leaves, thriving well in the common garden soil; and when grown strong is about 18 inches in height, and may be increased by seeds or dividing at the root.

Mr. Mackay has promised us, that if we will publish the work on New Holland plants, alluded to in the last article, he will reserve for it the whole of the numerous new and beautiful plants that he has lately received from that country, and which are now thriving in his Nursery at Clapton, besides numerous others that he soon expects from his collector in that country.

1. Calyx. 2. The Corolla spread open, to show the short tube, and the 5 imbricated segments, the 5 Stamens inserted in the middle of the tube, bearded at the base. 3. One of the Stamens in a younger state, inserted in the back of the anther. 4. Germen, terminated by a smooth Style, and a three-cleft thick stigma.

E. D. Smith Del. Pub. by R. Sweet, Dec. 1826. Weddell sc.

TRADESCANTIA rosea.

Rose-coloured Spiderwort.

Natural Order. COMMELINEÆ. *Brown prodr. p.* 268.

TRADESCANTIA. Perianthium profunde sexpartitum; foliolis interioribus petaloideis. *Stamina* 6, fertilia: *filamenta* villis articulatis: *antheræ* loculis magis minusve disjunctis. *Capsula* 3-locularis. *Semina* papilla embryotega instructa.—*Habitus* Commelinæ. Umbellæ *vel* racemi *terminalia vel axillaria, solitaria, gemina vel plura, nuda.*

T. *rosea*, erecta, foliis lineari-gramineis carinatis acutis glabris basi ciliatis, scapo folioso, pedunculis elongatis erectis, umbellis plurifloris, perianthiis glabris.

Tradescantia rosea. *Mich. fl. amer.* 1. *p.* 193. *Pursh fl. amer.* 1. *p.* 218. *Venten. cels.* 24. *Redouté liliac.* 94. *Hort. Kew. ed.* 2. *v.* 2. *p.* 204.

A hardy herbaceous perennial. *Roots* fleshy, throwing up numerous stalkless branches in a close tuft. *Leaves* numerous, crowded, linear, grass-like, keeled on the lower side, and channelled on the upper, obsoletely lined, smooth, and dotted all over with innumerable minute dots, that can scarcely be seen without a lens; *stem-ones* fringed at the base where they clasp the stem, with long white hairs. *Scape* short, leafy, smooth, slightly angular, producing several peduncles. *Peduncles* erect, cylindrical, thickest at the base, and gradually tapering upwards, smooth. *Umbels* several-flowered. *Pedicles* smooth, lengthened out as the flower arrives at maturity; surrounded at the base by a fleshy transparent sheath, which is terminated in unequal teeth. *Perianthium* deeply 6-parted; the 3 outer leaflets calyx like, oval, smooth, concave, scarcely acute, of a brownish green colour; 3 inner ones petal-like, spreading, broadly

ovate, acute, more or less undulate and crenulate, overlapping at the base, of a pale rose colour. *Stamens* 6, spreading; *filaments* fringed at the base with long jointed purple fringe, the upper part smooth; *anthers* 2-lobed, crescent-shaped; *pollen* bright yellow. *Germen* smooth and glossy. *Style* smooth, white, shorter than the filaments. *Stigma* capitate, papillose.

This pretty perennial plant is a native of North America, and is at present rather scarce in our collections, though certainly deserving a place in them all, particularly when grown and bloomed like the one from which our figure was taken, which produced the largest flowers, and in greater abundance, than any that we have ever seen before; the plant was sent us from the Nursery of Mr. Dennis, at Chelsea, in September last, and it continued to produce its flowers in abundance till the end of October. It thrives best in a soil composed chiefly of peat; but having a little light turfy loam mixed with it, and being a dwarf growing plant, is most proper for the front of the flower borders, where it will soon form a good tuft, and will be seen to most advantage; it may be increased by dividing at the root.

1. The 3 outer segments of the Perianthium. 2. One of the inner petal-like ones. 3. The 6 Stamens, the filaments bearded with jointed hairs. 4. Germen, terminated by the smooth slender Style, and small capitate Stigma.

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ŒNOTHERA serotina.

Late-flowering Œnothera.

Natural Order. ONAGRARIÆ. *Juss. ann. mus.* 3. *p.* 315.
ŒNOTHERA. Supra, fol. 5 *et* 133.

Œ. *serotina,* caule adscendente ramoso, foliis lanceolatis acutis denticulatis glabris basi attenuatis, petalis rugosis, capsulis pedicellatis oblongis angulato-alatis pubescentibus.
Œnothera serotina. *Swt. hort. brit. p.* 152.

Root perennial. *Stem* rather fruticose at the base, much branched; *branches* spreading, ascendant, nearly cylindrical, pubescent. *Leaves* scattered, narrowly lanceolate, acute, slender at the base, obsoletely toothed, smooth, and glossy. *Flowers* axillary, solitary, on short footstalks. *Peduncles* pubescent. *Calyx* tubular, pubescent; tube shorter than the limb, of a light green, gradually tapering to the base; limb spathaceous, bursting on one side for the expansion of the petals; 4-cleft at the base, and connected above the middle, terminated in 4 unequal subulate points. *Petals* 4, inserted in the calyx, emarginate, rugose or plaited, strongly veined at the base, of a bright yellow colour. *Stamens* 8, inserted in the mouth of the tube, every other one opposite to the petals: *filaments* smooth, gradually tapering upwards: *anthers* linear, incumbent: *pollen* granular, connected by a stringy web. *Style* pubescent at the base, and smooth upwards. *Stigma* 4-cleft, segments blunt, spreading. *Capsule* inferior, pubescent, oblong, 4-winged, and between each wing is an obtuse angle.

This pretty species of Œnothera, which we do not find described in any work that we have had an oppor-

tunity of examining, was received by Mr. Colvill from Mr. Shepherd, of the Botanical Garden at Liverpool, under the name that we have adopted, and which we believe was given it by Mr. Nuttall; we have also seen it in other collections by the same name; it is related to Œ. *fruticosa*, but is at once distinguished by its procumbent branching habit, though it is more frutescent than that species. It is a late flowering plant, and continues to produce its flowers till the frost cuts them off in Autumn. It is quite hardy, and thrives well in the common flower borders; is readily propagated by offsets from the roots, or from cuttings, which, if planted under hand-glasses, will root freely. It may also be raised from seeds, which sometimes ripen.

Our drawing was taken at the Nursery of Mr. Colvill, in the Autumn of 1825.

1. Calyx, divested of the petals, to show the insertion of the Stamens. 2. The four-winged Germen, terminated by the Style, which is pubescent, and the four-cleft Stigma.

J. L. Smith Del.

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Weddell sc

PHLOX nivalis.

Snow-white Lychnidea.

Natural Order. POLEMONIACEÆ. *D. Don in Edinb. phil. journ. Oct.* 1822.
PHLOX. Supra fol. 29.

P. *nivalis,* caule suffruticoso ramosissimo procumbente: ramis adscendentibus congestis pubescentibus apice subtrifloris, foliis linearibus fasciculatis cuspidatis ciliatis recurvis, pedicellis calycibusque villosis, tubo corollæ calyce duplo longiore; laciniis obcordatis plicato-lineatis.
Phlox nivalis. *Lodd. bot. cab.* 780. *Swt. hort. brit. p.* 286.

Stem suffruticose, very much branched, procumbent; *branches* crowded, ascending, thickly clothed with short woolly hairs, and generally terminated with three flowers. *Leaves* clustered, upper ones opposite, clasping the stem, linear, rigid, broad at the base, with a sharp point, smooth and glossy, from about the middle recurved, the margins fringed with woolly hairs. *Peduncles* nodding, about double the length of the calyx, thickly clothed with short villous hairs. *Calyx* 5-angular, 5-toothed, densely clothed with short spreading villous hairs, teeth linear, rigid, sharp-pointed, slightly spreading, scarcely as long as the tube. *Corolla* funnel-form, of a snowy white; tube slender, about double the length of the calyx; limb 5-cleft, divaricately spreading; segments obcordate, emarginate, slightly plaited, and striated with numerous lines, which are a little branched. *Stamens* 5, inserted in the tube at various distances: *filaments* very short and smooth: *pollen* orange-coloured. *Germen* smooth and glossy. *Style* short, smooth. *Stigma* trifid, the segments about the length of the style, papillose.

Our drawing of this pretty plant was taken last Spring, at the Nursery of Mr. Colvill, where there were several plants of it covered with flowers, which made a very pretty appearance. It makes a very pretty plant for the adorning of rock-work, but requires a sheltered situation, or to be covered with a mat, or some kind of covering, in severe frosty weather, as it is rather tender, being a native of Carolina; it is nearly related to P. *setacea* and P. *subulata*, which are also natives of the same country. A light sandy soil suits it best, or a mixture of light sandy loam and peat will agree very well with it; and young cuttings, planted under hand-glasses in Spring, will soon strike root, the glasses to have a little air occasionally, to keep them from damping; when rooted, the glass should be removed from them altogether, to harden them off for transplanting; they will then soon make nice plants. It is also a good plan to have some plants in pots, where they will flower very well, and can also be protected in a frame in Winter; and when in flower they can be removed to any situation, where their appearance is most desired.

The plants of this genus are very handsome, and particularly desirable for ornamenting the flower-gardens, but they are very badly known in collections, and much confused with each other; we, therefore, intend to give figures of all the sorts that we can procure, which will be the means of knowing what sorts are in the gardens, and it will also assist in setting them to rights.

1. Calyx. 2. Tube of the Corolla spread open, to show the insertion of the Stamens. 3. Germen, terminated by the Style and trifid Stigma.

E.D.Smith del. Pub by R. Sweet Jan 1827. Waddell's

TULIPA turcica.

Florentine Tulip.

Natural Order. TULIPACEÆ. *Kth. synops.* 1. *p.* 292.
TULIPA. Supra fol. 78.

T. *turcica*, flore solitario erecto, foliis lanceolatis acutis canaliculatis pulverulento-glaucescentibus margine incurvis, perianthii foliolis lanceolatis acuminatis basi barbatis: interioribus majoribus, filamentis basi villosis.
Tulipa turcica. *Roth catalect. bot.* 1. *p.* 45. *Pers. syn.* 1. *p.* 360. *Swt. hort. brit. p.* 426. non *Willden. enum. sup.*

Bulb small, smooth, and covered with a smooth brown shell. *Leaves* erect, lanceolate, taper-pointed, deeply channelled, the sides folded inwards, more or less powdered, clasping the stem. *Scape* erect, from a foot to 18 inches in height, leafy, one-flowered, smooth and glossy. *Perianthium* of 6 leaflets, or sometimes increased to 8, lanceolate, taper-pointed, densely bearded at the base, and slightly at the point: inner ones broadest, of a bright yellow; outer ones narrower, tinged with green. *Stamens* 6, inserted in the base of the leaflets: *filaments* widened at the base, hairy, densely villous at the bottom, every other one longer than the alternate one: *anthers* linear, shorter than the filaments: *pollen* yellow. *Germen* three-sided, smooth, terminated by a blunt, 3-lobed Stigma.

Our drawing was made from plants sent to us in flower by Mr. G. Charlwood, who observed that it was certainly a distinct species from T. *sylvestris*, as it was a much stronger growing plant, and its flowers were always erect, and that it was often imported by the name of the Florentine Tulip. We think there can be no doubt but it is the T. *turcica* of Roth and Persoon, but not

of the Supplement to Willdenow's Enumeratio; that we believe to be T. *cornuta* of Redoute.

The present plant thrives well in a warm border of light sandy soil, the bulbs to be planted the latter end of October, or the beginning of November; they should be planted from 4 to 6 inches deep, according to the lightness of the soil; when they have done flowering, and the leaves are decayed, the bulbs should be taken up and dried until the following season for planting, except in a light dry soil, where they may remain the year through; they may be increased by offsets from the bulbs, or by seeds, which should be sown as soon as ripe.

1. Bulb. 2. One of the outer leaflets of the Perianthium. 3. One of the inner ones, which is considerably larger. 4. The 6 Stamens, every other one longer than the alternate one. 5. Germen, terminated by the 3-lobed Stigma.

F. D. Smith Del.

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Weddell Sc.

GLADIOLUS alatus.

Winged-flowered Cornflag.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.
GLADIOLUS. Supra fol. 155.

G. *alatus*, foliis rigidis plicato-nervosis pubescentibus, perianthii lacinia suprema obovata erecto-recurva: lateralibus rhombeo-ovatis patentibus apice recurvis; inferioribus spatulatis acutis dependentibus.

Gladiolus alatus. *Linn. sp. pl.* 53. *Ker Bot. mag.* 586. *Andrews's reposit.* 8. *Hort. Kew. ed.* 2. *v.* 1. *p.* 97. *Roemer et Schult. syst.* 1. *p.* 416 *et p.* 426. *Spreng. syst. veg.* 1. *p.* 152.

Bulb-tuber small, flattish, clothed with a brown fibrous coat, which is deciduous, and slips off, when the plant is in full growth, leaving the bulb bare, and of a glossy white colour. *Leaves* rigid, narrowly ensiform, or lanceolate, outer ones blunt, inner ones more acute, strongly nerved and plaited, tapering to the base, and sheathing the stem, of a pale green colour; nerves numerous, longitudinal, pubescent, as is also the margins. *Scape* longer than the leaves, flexuose, sharply triquetrous, the leaves and sheaths running decurrent down it from one joint to the next. *Spatha* 2-valved, outer one half as long again as the inner, convolute, sharply keeled, striated with many small lines, blunt, and tipped with red: inner one convolute, of a thinner texture, and also much striated, bifid at the point. *Perianthium* irregular, widely spreading: tube very short, about 5 times shorter than the spathe: upper segment of the limb erect, or slightly recurved, obovate, tapering to the base, the margins slightly recurved, of a bright orangy scarlet, lighter in the centre, much veined: those by the side rhomboidally ovate, broad, spreading, points recurved, of a

bright orangy scarlet, with a dark purple line down the centre: 3 lower ones connected at the base, spatulate, acute, the lower one a little acuminate, of a golden yellow, all but the points, which are scarlet. *Stamens* 3, inserted in the throat of the tube: *filaments* bent round like an arch, villosely hairy, attached to the back of the anthers a little above the base: *anthers* linear, sagittate at the base: *pollen* cream-coloured. *Style* very hairy, bent downward in the same direction as the stamens. *Stigmas* 3, spreading, the points spatulate and fimbriate.

This handsome species has been lost to our collections for many years, and has now been reintroduced from the interior of the Cape by Mr. Synnot; several bulbs of it have flowered this Summer at the Nursery of Mr. Colvill, where our drawing was made; it is rather surprising that so handsome and curious a plant should have been lost from all the collections, particularly as it increases very freely by the offsets from its bulbs, which are produced in abundance; we believe that this species and many other Cape bulbs have been lost, by cultivators planting them in peat and leaf-mould, which is not strong enough to support them, so that the bulbs soon dwindle away to nothing; the leaf-mould is also much infested with different sorts of caterpillars, which very frequently destroy all the plants that are planted in it, by devouring their roots.

The present plant requires precisely the same sort of treatment as G. *viperatus*, to which it is nearly related; an equal mixture of turfy loam, peat, and sand, will suit them very well; and if allowed to remain in the open ground all the Winter, they will require to be covered in frosty weather.

1. The inner valve of the Spathe, showing its bifid point. 2. The three upper segments of the Perianthium, with two of the Stamens inserted in the mouth of the tube, the filaments thickly clothed with short hairs. 3. The 3 lower segments and the other Stamen. 4. Germen, terminated by the hairy Style, and 3 spatulate fimbriated Stigmas.

F. Smith. Del. Pub. by R. Sweet. Jan 1827. Weddell Sc.

EREMURUS spectabilis.

Showy Eremurus.

Natural Order. ASPHODELEÆ. *Brown prodr. p. 274.*

EREMURUS. Perianthium 6 partitum, post anthesin involutum. *Stamina* 6; impubera intra perianthium conduplicata; effœta longissime exserta. *Stylus* filiformis, fecundatus reflexus. *Stigma* simplex.

E. *spectabilis,* foliis radicalibus linearibus carinatis glaucescentibus, scapo racemoso, bracteis lineari-subulatis pedicellis parum brevioribus.

Eremurus spectabilis. *March. Bieb. taur. cauc.* 3. *p.* 269. *Cent. t.* 61. *Link enum.* 1. *p.* 328. *Spreng. syst. veg.* 2. *p.* 83. *Swt. hort. brit. p.* 416.

Asphodelus altaicus. *Willden. sp. pl.* 2. *p.* 154. *Pall. act. pet.* 1779. *p.* 260. *t.* 10. *Pers. syn.* 1. *p.* 367. *Swt. hort. sub. lond. p.* 71.

Perennial. Leaves from the root, several, radiately spreading, from a foot to 15 inches in length, linear, acute, sharply keeled at the back, obsoletely striate, slightly glaucous. *Scape* from 18 inches to 3 feet high, without leaves, angular, smooth, terminated in a long crowded raceme of flowers. *Bractes* linearly subulate, or broad at the base, and tapering to a long slender point, keeled at the back, sheathing the pedicles at the base. *Pedicles* smooth, about the length of or a little longer than the bractes, slenderest at the base, and thickening upwards. *Perianthium* 6-parted, nearly to the base: *segments* lanceolate and acute, the three outer ones nearly double the size of the inner ones, of a light yellowish green at the base, the points of a pale yellow; after flowering, the segments all roll inwards. *Stamens* 6, inserted in the base of the perianthium, close to the ger-

men: *filaments* very long, doubled up before the expansion of the flower, afterwards exserted and spreading; smooth, broad at the base, and tapering upwards, attached to the back of the anthers. *Germen* smooth, nearly globular, 3-celled, 6-lined. *Style* smooth, filiform, ascending, the point slightly reflexed. *Stigma* a simple point.

For the opportunity of giving a figure of this rare plant, we are indebted to Mr. William Anderson, the Curator of the Apothecaries' Company's Garden at Chelsea, who kindly informed us when it was in flower; the plant from which our drawing was taken, is cultivated in the open ground, in the botanical arrangement of hardy perennial plants, where it has ripened its seeds. It is a native of Tauria and Caucasus, and is perfectly hardy, thriving best in a light loamy soil, and may be increased by seeds, or dividing the roots.

1. The six leaflets of the Perianthium, the three outer ones largest. 2. The 6 smooth Stamens, longer than the Perianthium. 3. Germen, terminated by a slender smooth Style and simple Stigma. 4. Flower overblown, showing its involute leaflets.

E.D. Smith Del.   Pub. by R. Sweet Feb. 1827.   Weddell sc.

ADLUMIA cirrhosa.

Tendrilled Adlumia.

Natural Order. FUMARIACEÆ. *DC. syst. nat. 2. p. 105.*

ADLUMIA. Petala 4 connata in *Corollam* monopetalam fungoso-persistentem apice 4-lobam basi bigibbam. *Stamina* diadelpha, imæ corollæ inserta, cum eâ persistentia. *Siliqua* bivalvis polysperma, ovali-oblonga, corolla induviata, dehiscens.—Herba *glabra, delicatula, caule subtortili et petiolis cirrhosis scandens, habitu Cysticapnum referens, ex Americâ boreali orta.* DC. syst. nat. 2. p. 111.

Adlumia cirrhosa. *Raf. in Desv. journ. bot.* 1809. *v.* 2. *p.* 169. *DC. syst. nat.* 2. *p.* 111. *Prodr.* 1. *p.* 126. *Swt. hort. brit. p.* 16.

Corydalis fungosa. *Vent. choix. p. et. t.* 19. *Pers. syn.* 2. *p.* 269. *Willd. enum.* 2. *p.* 739. *Pursh fl. amer. sept.* 2. *p.* 468.

Fumaria fungosa. *Hort. Kew. ed.* 1. *v.* 3. *p.* 1. *ed.* 2. *v.* 4. *p.* 239. *Willd. sp. pl.* 3. *p.* 857.

Biennial. Stems several from the same root, simple, climbing, flexuose or a little twisted, acutely angular on the lower part, and channelled with numerous furrows, the upper part cylindrical or very slightly angular, smooth and glaucous, purplish near the base. *Leaves* alternate, distant, slightly glaucous, smooth; lower ones twice ternate, the others bipinnate; segments obovate or ovate, wedge-shaped, petiolate, the points divided into 3 segments, 3-lobed or 3-toothed. *Petioles* long, bearing tendrils at the point, which are composed of small reflexed, hooked leaflets. *Flowers* numerous, in compound racemes. *Peduncle* growing from the base of the petiole, loose, reflexed, generally 12-flowered, the branchlets trifid and 3-flowered. *Pedicles* smooth, slender, thickened at the point, the base bracteate. *Bractes* small, linear, acute. *Sepals* 2, very small, lanceolate,

acute, brownish, striate. *Corolla* of 4 petals, all connected into one tube, the tube flattened and emarginate at the base, where it is slightly bigibbous, the sides striate and rugged, of a pale lilac or blush: limb shortly 4-lobed; 2 outer lobes spreading, concave or spoon-shaped, keeled at the back, and marked with a small reddish speck, 2 inner ones erect, or connivent, joined at the point. *Stamens* joined to the tube of the corolla and constituting a fungous-like sheath, the upper part distinct, and consisting of 2 bundles, each bearing 3 anthers. *Pod* oblong, compressed, terminated by a slender *Style* and a two-lobed crested *Stigma*. *Seeds* 4 to 6, black and shining.

Our drawing of this pretty plant was taken in the year 1825, at the Nursery of Mr. Colvill, who received it the year before from North America; it makes a very pretty appearance when climbing up the sticks that are put in to support it, and it is covered with flowers all the Summer, and till late in Autumn, when it ripens plenty of seeds: those, if sown as soon as gathered, will produce flowering plants for the next Summer, but some should also be sown in Spring, to flower early the Spring following; it thrives best in a rich light soil, and as it is rather succulent it is best to protect it a little in severe frosty weather, if it is not grown in a sheltered situation; some plants of it may also be protected in frames through the Winter, planted singly in small pots, when care must be taken that they do not get too much wet, or they will be apt to rot; they are also liable to damp, if more than one plant is grown in the same pot.

1. The Calyx of two sepals. 2. Corolla spread open, to show the 4 connected Petals, and the insertion of the Stamens. 3. The two bundles of Stamens, each terminated by three anthers. 4. The flat Pod, terminated by the Style and two-lobed crested Stigma.

E.D. Smith Del. Pub. by R. Sweet Feb. 1827. Waddell Sc.

PHLOX Carolina.

Spear-leaved Lychnidea.

Natural Order. POLEMONIACEÆ. *D. Don in Edinb. phil. journ.*

PHLOX. Calyx profundè 5-fidus, connivens. *Corolla* hypocrateriformis, limbo explanata, 5-partita: segmentis cuneatis. *Stamina* in tubo supra medium inserta, valdè inæqualia. *Capsula* subrotunda: loculis monospermis! valvis membranaceis. *Semina* oblonga, extùs convexa. *Albumen* magnum. *Radicula* cotyledonibus duplò longior!—Herbæ *perennes, rarò suffrutices* (*Amer. bor.* unâ *ex Asiâ boreali-orientali*) *plerique erectæ.* Folia *opposita! integerrima, sessilia.* Flores *terminales, paniculati v. corymbosi, lilacini v. rosei, rariùs rubri, cœrulei aut albi.* D. Don on the Natural Family of Plants called Polemoniaceæ. p. 5.

P. *Carolina,* foliis lanceolatis acuminatis glabris margine et nervis subtus scabris, caule pubescente scabro, paniculis corymbosis subfastigiatis; ramulis multifloris, laciniis calycis lanceolatis erectis, segmentis corollæ rotundatis.

Phlox Carolina. *Linn. sp. pl.* 216. *Willden. sp. pl.* 1. *p.* 841. *Pers. syn.* 1. *p.* 186. *Hort. Kew. ed.* 2. *v.* 1. *p.* 326. *Botan. magaz.* 1344.

Perennial. Stem erect, two to three feet high, very rough, being thickly clothed with a very short horny pubescence. *Leaves* opposite, nearly sessile, clasping the stem, elongately lanceolate, and tapering to a long sharp point, slightly undulate, obsoletely reticulately veined, smooth on both sides, except the margins and nerves underneath, which are very rough; lower ones narrower, nearly linear, the upper ones shorter and broader. *Flowers* in a branching panicle, generally very much crowded, the main branches rather distant, and terminated in a close corymbus. *Peduncles,* or small branches, 10 to 20-flowered. *Bractes* narrowly linear or subulate.

Pedicles short, rough, and pubescent. *Calyx* deeply 5-parted, 5-angular at the base, slightly tuberculate: segments erect, narrowly lanceolate, sharp-pointed, slightly keeled, with membranaceous margins. *Corolla* salver-shaped; with a long tube, about twice the length of the limb, curved, striate, smooth and glossy, purple; *limb* divided into 5 roundly obovate quite entire segments, of a bluish purple, starred at the base with a red purple, and fading to nearly blue. *Stamens* 5, inserted in different parts of the tube, two of them exserted partly beyond the mouth: *filaments* very short, inserted in the back of the anthers: *pollen* orange-coloured. *Style* slender, smooth, enclosed in the tube. *Stigma* trifid, the segments spatulate, spreading.

Our drawing was made this Autumn, from fine specimens kindly sent to us from the choice collection of Robert Barclay, Esq., of Bury-hill, who received it the year before from North America, sent by Mr. Nuttall as a new species, and it certainly is not the P. *Carolina* of Pursh, judging from his description, which is more applicable to P. *triflora*; or perhaps he has confused the two species together, as appears likely, by his giving the P. *triflora* of Michaux as a doubtful synonym; but we believe ours to be the plant intended by the authors above referred to; it thrives well in a rich light soil, but is sometimes destroyed by severe frost, or too much wet in Winter, so that it is advisable to preserve some plants in small pots, that they may be protected in frames in severe frost or very wet weather, or those plants in the borders may be covered with some dry straw or litter in severe frosty weather. Young plants are easily raised, as cuttings taken off in a young state, and planted under handglasses, will soon strike root.

1. Calyx. 2. Tube of the Corolla spread open, to show the insertion of the Stamens. 3. Germen, terminated by the smooth slender Style, and trifid Stigma.

E.R.Smith Del. Pub. by R. Sweet. Feb. 1827. Weddell sc.

POTENTILLA splendens.

Silvery lined-leaved Cinquefoil.

Natural Order. ROSACEÆ. *Juss. gen.* 334.
Tribus II. *POTENTILLÆ. Kunth synops. v.* 3. *p.* 464. *Supra fol.* 124.
POTENTILLA. Supra fol. 124.

P. *splendens*, caulibus erectis villosis, foliis interruptè pinnatis utrinquè sericeo-candicantibus acutissimè dentatis valdè nervosis subplicatis, stipulis caulinis latis dentatis, floribus corymboso-paniculatis, laciniis calycinis ovatis acutis extùs sericeis, petalis late ovatis lineatis calyce vix longioribus, carpellis lævibus.
Potentilla splendens. *Wallich. Don prodr. fl. nepal. p.* 230. *DC. prodr.* 2. *p.* 582. *Hook. Bot. mag.* 2700. *Swt. hort. brit. p.* 146. non *Spreng.*
Potentilla lineata. *Treviranus. ex Spreng. syst. veg.* 2. *p.* 534.
Potentilla Naspata. *Hamilton Mss. in herb. Lamb.*

Root perennial, herbaceous. *Stems* several from the same root, erect, ferruginous, villosely hairy, from 1 to 2 feet in height, the upper part branched: flower branches forked, and producing flowers in the forks, and also lateral. *Leaves* interruptedly pinnate, of a glossy silvery white appearance, occasioned by a white silky down: *lower leaves* from 6 to 9 inches in length, the lower leaflets small, and gradually becoming larger upwards, the terminal ones largest: between each pair of large leaflets, which are elliptic or ovate, and very sharply serrate, are 2 or 3 other pair of leaflets, those are all variable in size and shape, but all sharply serrate, the lowermost very small, 2 or 3 lines long; the next pair half an inch long, of the same shape as the large ones; then again a pair of very small ones; the large ones are from an inch to one and a half inches in length, and about three quarters of an inch broad, points of the teeth all bearded: *stem leaves* becoming gradually shorter upwards, and with very short footstalks; the leaflets often alternate, particularly the small ones, and much more irregular, but all of a handsome silky or silvery appearance, and all elegantly lined, giving an appearance of being plaited, the under side whitest and strongly veined, upper side furrowed. *Stipules* broadly ovate, acute,

sharply toothed, clasping the stem, and joined to the petioles. *Peduncles* short and stout, cylindrical, densely clothed with short villous hairs; between the forks of the branches, and sometimes lateral, producing at the base a ternate or simple leaf. *Calyx* deeply 5-parted, segments ovate, acute, about the length of or scarcely as long as the petals. *Bractes* 5, attached to the calyx, ovate, acute, sometimes entire, and sometimes 2 or 3-cleft, 2 or 3-lobed or toothed, spreading, also sericeous. *Petals* 5, or sometimes increased to 6, ovate, more or less undulate, striate, of a bright yellow, about the length of or a little longer than the calyx. *Stamens* 20, spreading, unequal in length, surrounding the carpella: *filaments* smooth, pale yellow: *anthers* bursting by the sides to discharge the pollen, which is of a pale sulphur colour. *Carpella* numerous, producing the style from one side. *Styles* smooth, pale yellow. *Stigma* simple. *Seed* kidney-shaped, smooth, and glossy.

Fine specimens of this beautiful plant were given us by Robert Barclay, Esq., of Bury-hill, in the Autumn of 1825, from which our drawing and description were made; the plants were grown in his borders in the open ground, and made a grand appearance, as they were about two feet high, and their shining silvery leaves were some of them 10 inches in length. We have also received a plant of it from Messrs. Whitley, Brames, and Milne, at the Fulham Nursery, but as that was grown in a pot it did not show its character or beauty, but was more like the figure in the Botanical Magazine, 2700, which was from a much weaker specimen than ours, and we have never seen the stem leaves produce their leaflets all opposite as represented in that figure; the veins in the flowers are also left out in the figure; and in the petal given for the dissection they are altogether incorrect, as is also the length of the stamens; this is, most probably, the fault of the engraver. P. *atrosanguinea*, B. M. 2689, is also very incorrect, being represented without pubescence; the stamens are also altogether wrong, as well as the colour of the flowers.

1. Calyx, with the 5 bractes surrounding its base. 2. Stamens spread open, to show their inequality in length. 3. The head of Carpella in a young state, each producing a slender Style. 4. One of the Carpella removed. 5. Petal, to show the origin and ramification of the nerves.

Pub. by S. Curtis. Feb. 1817.

FERRARIA divaricata.

Spreading-anthered Ferraria.

Natural Order. IRIDEÆ. *Brown prodr.* 1. *p.* 302.
FERRARIA. Supra fol. 148.

F. *divaricata*, caule subflexuoso apice ramoso, foliis lineari-ensiformibus acutis striato-lineatis glaucescentibus basi vaginantibus, spathis plurifloris, lobis antheræ divaricatissimis.
Ferraria divaricata. *Swt. hort. brit. p.* 396.

Root flat, smooth, very much like F. *obtusifolia*, but smaller and flatter. *Stem* slightly flexuose, leafy, about 18 inches in height, branched near the summit, nearly cylindrical, but slightly angular, smooth, and slightly glaucous. *Leaves* sheathing the stem at the base, linearly or narrowly ensiform, acute, glaucous, striate with numerous longitudinal lines or nerves, inner margin near the base membranaceous; stem ones shorter, and inflated at the base. *Spatha* 2-valved, producing several flowers in succession; valves acute, with membranaceous margins, inflated, striate, glaucous; outer one about 3 times shorter than the inner: inner one keeled at the back. *Peduncles* scarcely a third of the length of the spathe, a little flattened, of a pale transparent colour, surrounded by membranaceous bractes. *Germen* very long, about 1¼ inch in length, bluntly triangular, narrowing upwards, nearly transparent, smooth, and glossy. *Flower* of a brown chocolate colour, the margins a little lighter, campanulate about half the length, the upper part radiately spreading, producing a great deal of honey at the base. *Perianthium* deeply divided into 6 segments, imbricate about half way up, reflexed about the middle, the points spreading: outer segments about double the breadth of the inner ones; all lanceolate and taper-pointed, very much curled at the margins, and below the bend marked with several brown purple lines, and at the base is a green mark. *Stamens* 3; *filaments* all connected into a long cylindrical, smooth, purple tube, the points distinct, and attached to the back of

the anthers: *anthers* 2-lobed, the lobes divaricately spreading, quite distinct, except at the points: *pollen* orange-coloured. *Style* enclosed in the tube, smooth and slender. *Stigmas* 3, each 2-cleft, dilated and jagged, and each segment fringed on the inside with a large pencil-like tuft of fringe, which is speckled with brown, yellow, and purple.

The present curious plant is another of the species already mentioned by us as being introduced from the Cape by Mr. Synnot, and flowered at the Nursery of Mr. Colvill, where our drawing was made; different bulbs that flowered, varied considerably in the colour of their flowers, but they are readily distinguished from all the other species, by the divaricate lobes of the anthers, which very much resemble some of the Orchideous plants; another very curious species has flowered at Mr. Colvill's Nursery, which we have named F. *angustifolia* in our Hortus Britannicus; it has very narrow subulately linear leaves, and a greenish flower, somewhat resembling F. *antherosa*, which species we believe is also in the same collection, but has not yet flowered. The present species thrives well in a light sandy soil, or an equal mixture of light turfy loam, peat, and sand, will suit it very well. Its bulbs will succeed well if planted by the side of a wall in a southern aspect, and to be covered with mats or straw in frosty weather; they will also succeed well in pits or frames, to be covered up in frosty weather; or if grown in beds in the open air with other bulbs, they must be well covered in Winter, or the bulbs may be taken up in Autumn after flowering, and planted again in Spring; if grown in pots, and kept in the Greenhouse or frames, they will require to be kept quite dry after flowering, and to be potted in fresh mould in October or November, and as they begin to grow they will need some water, which must be increased by degrees: it increases by offsets from the bulbs.

1. One of the outer segments of the Perianthium. 2. One of the inner smaller ones. 3. The three Stamens connected into a long tube, the points distinct, showing the two-lobed Anther, the lobes very much divaricate, and only connected at the point, very much like an Orchideous plant. 4. Germen, terminated by the Style, and 3 bipartite Stigmas terminated in pencil-like tufts of fringe.

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J.D.Smith Del.
Pub. by R. Sweet, March. 1827.
Waddell Sc.

CHRYSANTHEMUM tripartitum.

Trifid-leaved Chrysanthemum.

Natural Order. COMPOSITÆ. *Adanson fam.* 2. 103.
Subordo VIII. *ANTHEMIDEÆ. Kth. synops.* 2. *p.* 513.
CHRYSANTHEMUM. Involucrum hemisphæricum, polyphyllum; foliolis imbricatis, coriaceis, margine scariosis. *Receptaculum* convexum, nudum. Flosculi disci tubulosi, hermaphroditi; radii ligulati, feminei. *Akenia* angulata, apice calva.—Herbæ, *rarissime* suffrutices. Folia *alterna, integra, incisa et pinnatifida.* Flores *terminales, pedunculati;* radio *luteo, albo aut roseo.* Kth. loc. cit. p. 513—514.

C. *tripartitum,* caule erecto basi suffruticoso, foliis petiolatis tripartitis basi rotundato-cordatis supra scabriusculis subtus tomentoso-pubescentibus; segmentis oblongo-lanceolatis acutis sinuatis acute dentatis, pedunculis terminalibus corymboso-paniculatis, radiis 2-3-dentatis foliolis involucri duplo longioribus.
Chrysanthemum indicum. *Pers. syn. v.* 2. *p.* 461. *excl. synon.*

Perennial. Stems 2 to 3 feet in height, frutescent at the base, and sometimes remaining alive for 2 or 3 years, more or less branched: *branches* slightly angular, clothed irregular with an entangled tomentum, or decumbent woolly hairs. *Leaves* petioled, three-parted, roundly cordate at the base, the upper side clothed with short hairs, that are seated on minute tubercles, which gives it a roughish appearance; underneath 3-nerved from the base, and thickly clothed with decumbent branching woolly hairs: segments oblongly-lanceolate, acute, more or less sinuate, and toothed with sharp unequal teeth. *Petiole* slightly winged. *Stipules* small, flat, horizontal, ovate, bluntish, sometimes unequal sided, and slightly toothed. *Flowers* terminal,

yellow, paniculately corymbose. *Peduncles* thickly clothed with tufts of woolly hairs. *Involucrum* of many leaflets, hemispherical; *leaflets* imbricate, upper ones longest, pubescent, oblongly ovate, concave, with broad, scariose, membranaceous points, and margins. *Receptacle* convex, punctate, naked. *Rays* narrow, about twice the length of the leaflets of the Involucre, shallowly 2 or 3-toothed, of a pale yellow, tubular at the base, and producing a perfect style and bifid stigma, and apparently perfect seed. *Florets of the disk* numerous, funnel-shaped, 5-toothed, producing both stamens and pistils. *Stamens* 5: *filaments* distinct, smooth: *anthers* naked, connected into a tube. *Style* smooth, exserted, longer than the stamens. *Stigma* bifid, the points dilated, and slightly recurved.

From the description in Persoon's Synopsis, the present appears to be the plant meant there as C. *indicum;* but it is certainly not that of other authors, which is a plant with sinuate leaves, and a much smaller flower, such as is published by Mr. Sabine, in the Horticultural Society's Transactions, and also figured in the works of several old authors.

The present species was introduced from China a few years back, by Mr. Brookes, of the Balls-pond Nursery, Islington, and is now become common in the collections about London; it is quite hardy; but as its time of flowering is in Winter, it will seldom expand its flowers in the open air, except the plants are near a south wall, and are protected with mats in frosty weather, so as to keep the buds fresh till Spring; but it will flower in a warm light room, or in the Greenhouse; and cuttings, planted under hand-glasses, root freely.

Our drawing was made from a plant at the Apothecaries' Company's Garden at Chelsea, in December last.

1. Involucrum. 2. Receptacle. 3. Floret of the Ray. 4. Floret of the disk spread open, showing its nerves. 5. The 5 Stamens; the filaments distinct, and the anthers connected. 6. Young Seed terminated by the Style, and bifid spreading Stigma.

E.D. Smith Del. Pub. by R. Forest. March 1827. Weddell Sc.

LATHYRUS mutabilis.

Changeable-coloured Lathyrus.

Natural Order. LEGUMINOSÆ. *DC. prodr.* 2. *p.* 93.
Subordo I. *PAPILIONACEÆ. Supra fol.* 159.
Tribus IV. *VICIEÆ. Corolla* papilionacea. *Stamina* diadelpha (9 et 1). *Legumen* continuum. *Cotyledones* crassæ farinaceæ, per germinationem immutatæ sub terrâ intiâ spermodermium inclusæ remanentes. *Radicula* inflexo-curva.—Folia *abruptè pinnata (excepto Cicere), petiolo communi apice in setulam cirrhumve desinente basi super caulem non articulato.—Tribus apprimè naturalis accedens hinc ad Phaseoleas ex habitu volubili et cotyledonibus crassis, et ad Hedysareas mediante Adesmiâ foliis abruptè pinnatis donatâ; illinc, sed è longinquo, ad Entadas ob folia abruptè pinnata, petiolos in cirrhum abeuntes, et cotyledonum historiam.* DC. l. c. p. 353.
LATHYRUS. Calyx campanulatus 5-fidus, lobis 2 superioribus brevioribus. *Corolla* papilionacea. *Stamina* diadelpha. *Stylus* complanatus, apice dilatatus, anticè villosus aut pubescens. *Legumen* oblongum, polyspermum, bivalve, 1-loculare. *Semina* globosa aut angulata.—Herbæ *sæpiùs scandentes.* Stipulæ *semisagittatæ.* Petioli *apice in cirrhum ramosum abeuntes.* Foliola 1-3-juga. Pedunculi *axillares.* DC. l. c. p. 369.
Sect. I. EULATHYRUS. Vexillum basi edentatum. Foliola opposita vel aborta nulla. Petiolus angustè alatus.

L. *mutabilis*, caule flexuoso alato: alis ciliato-pubescentibus, foliis 3-4-jugis: foliolis ovatis obtusis mucronatis glaucescentibus, stipulis semisagittato-ovatis acutis basi angulato-dentatis, pedunculis multifloris folio brevioribus, laciniis calycinis ovato-lanceolatis ciliatis inæqualibus longitudine tubi, leguminibus convexis angustis punctulatis pubescentibus.

Root perennial. *Stems* several from the same root, from two to three feet in height, more or less flexuose, broadly winged from one leaf to the next, the wings fringed with short pubescent hairs; besides the wings there are two narrow sharp smooth angles. *Leaves* pinnate, with from 3 to 4 pair of leaflets: the petiole winged, and terminated in a trifid tendril, the upper segment of which is often again trifid: *leaflets* ovate, obtuse, with a short mucro, rounded at the base, slightly glaucous, many nerved underneath, the lower ones largest. *Sti-*

pules about the size of the leaflets, ovate, acute, semisagittate at the base, where it is toothed or angulate, with unequal large teeth or angles, the upper part sometimes also toothed, but with very small inconspicuous teeth, and sometimes entire, the margins fringed while young, but which wears off by age, strongly nerved from the base, the nerves branching. *Peduncles* axillary, many-flowered, sharply angled, shorter than the leaf. *Pedicles* short, nodding. *Calyx* tubular, 5-cleft, of a purplish colour, and glaucous, segments fringed; two upper ones very short, ovate, acute, the two side ones ovately lanceolate, taper-pointed, and keeled: lower one narrow, linear, and also keeled. *Flowers* changeable in colour, at first of a purplish pink, striped with numerous dark purple branching lines, afterwards changing to a brownish green, and the lines becoming paler. *Vexillum* obcordate: *alæ, or wings*, with a long unguis: *keel* sharp, with an acute point. *Stamens* 10, diadelphous, 1 distinct, the other 9 joined above half way up: *filaments* smooth. *Germen* pubescent. *Style* flat, linear, bent upwards. *Stigma* a little dilated, and bearded with very short hairs. *Pod* narrow, convex, pubescent, and dotted inside with numerous small dots.

Our drawing of this handsome species was made from a plant at the Apothecaries' Garden, at Chelsea, where it was raised from seed, that Mr. Anderson received from Dr. Fischer, of the Royal Botanic Garden, at St. Petersburgh, as a new species: it is nearly related to L. *pisiformis*, but differs in the broad laciniæ of its calyx, the form of the flowers, and its convex pubescent pod. We believe there are also two, if not more species, confused under L. *pisiformis*, as the figure in Gmelin's Flora Sibirica, and that in Linnæus's decas., we think can certainly not both belong to the same species. The present plant succeeds well in the open borders in the common garden soil, growing to the height of 2 to 3 feet, and it will probably attain a greater height when the plants become older. Seeds of it ripen plentifully, which should be sown in Spring.

1. Calyx. 2. Vexillum. 3. The two alæ, or wings. 4. Keel. 5. The 10 Stamens, 1 distinct, and 9 united about half their length. 6. Young pod, very pubescent, terminated by the linear Style, and bearded Stigma.

E.D. Smith. Del. Pub. by R. Sweet. March. 1817. Weddell Sc.

YUCCA acuminata.

Tapering-flowered Adam's Needle.

Natural Order. TULIPACEÆ. *Kth. synops.* 1. *p.* 292.
YUCCA. Supra fol. 53.

Y. *acuminata*, caule erecto suffruticoso, foliis lanceolatis integerrimis marginatis glabris rigidis supra concavis, floribus paniculatis, bracteis lineari-lanceolatis acuminatis pedicellis longioribus, perianthii foliolis lanceolato-ellipticis acuminatis.

Stem short and thick, frutescent; in the specimens that we have seen scarcely a foot in height. *Leaves* numerous, rigid, straight, lanceolate, concave, quite entire, and smooth at the edges, terminated in a long brown sharp spine, underneath convex, more or less attenuated towards the base, and tapering at the point, of a palish green, with a brown margin; lower ones spreading: upper ones erect, and imbricate. *Flower-stem* between 3 and 4 feet long, angular, and striate, alternately branched: branches acutely angular, spreading. *Flowers* solitary, alternate, nodding, not in pairs, as in some species. *Bractes* 2, narrowly lanceolate, and taper-pointed, brown, and deciduous, one of them longer than the pedicle, the other scarcely the length. *Pedicles* nodding. *Perianthium* deeply 6-parted, the leaflets lanceolate, or narrowly elliptic, tapering to a long slender point, striated with numerous faint lines, of a greenish white, tinged with brownish purple, the points curved inwards: inner ones broadest. *Stamens* 6, inserted in the base of the perianthium: *filaments* roughly pubescent, thickening upwards, the points bent outwards;

anthers smallish, ovate, attached by their back to the filaments. *Germen* superior, three-sided. *Stigmas* 3, with two-lobed points.

Our drawing of this handsome species of Yucca, was made in October last, at the Nursery of Mr. Pamplin, at Lavender-hill, in the Wandsworth-road, near London, where it was supposed to be a weak plant of *Yucca-gloriosa;* but it immediately struck us as being a distinct species, which we had an opportunity of ascertaining by comparing it with that species, from which it differs very much, the perianthium of that having broad ovate leaflets, as represented in the Botanical Magazine, those of the present being narrow and acuminate; the leaves are also much less, as is the plant altogether, the trunk being scarcely a foot in height. In November last, we saw another plant of the same species, and about the same size, in full bloom at the Nursery of Mr. Miller, at Bristol. It is nearer related to Y. *rufocincta* than to any other with which we are acquainted, but is distinguished at first sight, the leaves of that being weak and flaccid, drooping from about the middle, and of a different form, those of the present being straight, and rigid; the flower of that, we believe, to be also different, but we had no opportunity of comparing them. The whole of the genus thrive well in a rich light soil, and are increased by the suckers at the roots.

1. The outline of the base of one of the lower leaves, to show the difference between it and one of the stem ones. 2. One of the stem leaves. 3. The 6 pubescent Stamens, inserted in the base of the Perianthium. 4. The three-sided germen, terminated by three two-lobed Stigmas.

J. D. Smith Del.

Pub by R. Sweet March 1827

Waddell Sc.

PRIMULA prænitens γ *albiflora*.

White-flowered Chinese Primrose.

Natural Order. PRIMULACEÆ. *Brown prodr. p.* 427.
PRIMULA. Supra fol. 8.

P. *prænitens*, undique inæqualiter pilosa, foliis cordatis lobatis incisis dentatis, umbellis multifloris sæpe proliferis, bracteis lanceolatis incisis, calyce inflato conico basi intruso.
Primula prænitens. *Ker Botan. regist.* 539. *Spreng. syst. veg. v.* 1. *p.* 573. *Swt. hort. brit. p.* 329.
α *rosea*, floribus roseis emarginatis.—Primula sinensis. *Hooker Exot. flor.* 105. *Sims Botan. magaz.* 2564. non *Lour.*
β *dentiflora*, calyce multifido, corollæ laciniis inciso-dentatis. *Ker loc. cit.* Primula sinensis. *Lindl. collect. bot.* 7. non *Lour.*
γ *albiflora*, floribus albis emarginatis. *Supra.*

Biennial, or scarcely *perennial*, every part of the plant, even to the under side of the corolla, covered with spreading hairs, which are very unequal in length. *Leaves* radiately spreading, with long footstalks, cordate, flat, or slightly rugose, 7 to 9-lobed, incised, and toothed with very unequal bluntish teeth, of a pale green in the white-flowered variety, and purple underneath in the red-flowered ones. *Petioles* long; broad, and flat near the base on the upper side, and channelled upwards, the lower side rounded. *Scapes* numerous, from 4 inches to a foot in height, stout, erect, cylindrical. *Umbels* many-flowered, generally proliferous. *Involucre* of numerous lanceolate acute bractes, several of which are more or less jagged, or pinnatifid. *Pedicles* spreading, cylindrical. *Flowers* slightly nodding, rose-coloured, lilac, or white, with a yellow circle at the mouth, on which is 5 darker spots. *Calyx* very much inflated, conical, 5 or more toothed, connivent at the point, very broad and flat, or truncate at the base. *Corolla* hypocrateriform; tube slender, variable in length, contracted about half its length: limb 5-cleft, large, spreading, continuing to increase in size after expansion: *laciniæ* obcordate, emarginate, or more or less toothed, as in *var.* β. *Stamens* 5, inserted in the tube, close above the contracted part: *filaments* very short; *anthers* oblong,

slightly sagittate at the base, two-lobed, their backs joined to the filaments, all included in the tube: *pollen* straw-colour, powdery. *Germen* smooth, inflated. *Style* smooth, slender, sometimes inclosed in the tube, and sometimes slightly exserted. *Stigma* turbinate, with a flat truncated point.

We believe the present species will, hereafter, have to be removed from Primula, as it differs materially from that genus; first, in the shape of its calyx, which is broad and truncate at its base, and tapering to the point, not attenuated at the base, as in the true species of Primula; secondly, in the difference of its pollen; and, lastly, in its turbinate truncate stigma. We cannot conceive how it should have received the name of P. *sinensis* by so many authors, there having been another very different species, described long since under that name by Loureiro, and adopted by Rœmer and Schultes, and also by Sprengel, in their editions of the Systema Vegetabilium; and as that has the right of priority, it certainly must be adopted.

Our drawing of this handsome variety was taken at the Nursery of Messrs. Malcolm, Gray, and Co., at Kensington, where we observed many plants of it in full bloom; they first received it from Mr. James Watson, Gardener to Jos. Delafield, Esq. of Campden-hill: all the varieties succeed best in a light sandy loam, and a little peat mixed with it to keep it open; and they may be grown in a sheltered border by the side of a south wall, so as to be covered with a mat, or some straw, in severe frost. They also thrive well in pots in a light window of a warm room, or in the Greenhouse, where they will flower nearly all the Winter. Seeds of it ripen plentifully; those, if sown as soon as ripe, will make flowering plants for the next season; they should be sown in pots, which may be placed in a cold frame, or Greenhouse, or on a shady border, but not in a hotbed, as is recommended by some people, or they will then be drawn up, and damp off.

1. Two of the Bractes of the Involucrum, to show their difference. 2. Calyx. 3. Tube of the corolla, showing the contraction in the middle. 4. The same spread open, to show the insertion of the Stamens. 5. Stamen detached. 6. Germen terminated by the Style, and turbinate Stigma.

L.D. Smith Del. Pub by R. Sweet April 1827. Tiddell Sc.

LEONURUS heterophyllus.

Various-leaved Mother-wort.

Natural Order. LABIATÆ. *Brown prodr.* 499.

Sect. II. Stamina 4 fertilia, antheris omnium v. duorum completis.—A. Calyx regularis 5-fidus v. 5-10-dentatus.

LEONURUS. Calyx 5-dentatus. *Corollæ labium superius* integrum; *inferius* tripartitum: lacinia media indivisa. *Antheræ* lobis parallelis. *Brown Hort. Kew. ed.* 2. *v.* 3. *p.* 405.

L. *heterophyllus,* foliis inferioribus cordatis subrotundis crenatis lobatisque; mediis tripartitis basi cuneatis: segmentis lanceolatis acuminatis: lateralibus bifidis: terminalibus trifidis incisodentatis; foliis terminalibus simplicibus lineari-lanceolatis, calycibus pungentibus subpubescentibus, galea corollæ planiuscula recta extus villosa.

Leonurus heterophyllus. *Swt. hort. brit. p.* 321.

Annual. Stem erect, 2 feet high, branched a little, bluntly 4-sided and channelled, densely clothed with a short hoary pubescence, bearded at the joints with a circle of long spreading white hairs: *branches* spreading, or nearly erect. *Leaves* very variable, slightly pubescent on both sides, the nerves more densely so: *lower ones* cordate, nearly round, doubly crenate, every alternate notch very small, *the next* are irregularly lobed, also cordate, the lobes blunt and notched; *those higher up the stem* are wedge-shaped at the base, deeply 3-parted, the sinuses rounded; side segments bifid, the lower one 2-lobed, and the upper one 3-lobed, and bluntly toothed: terminal one trifid, the segments more or less cut and toothed, oblong or lanceolate, those from above the middle of the stem acuminate: *above those* are trifid leaves, the segments linearly-lanceolate, taper-pointed, some sharply serrate, others entire: *terminal ones* simple, linearly lanceolate, taper-pointed, and quite entire. *Petioles* long, densely pubescent, channelled on the upper side, and convex on the lower. *Flow-*

ers numerous, in dense whorls, sessile. *Bractes* numerous, unequal in length, subulately linear, hairy, and terminated by a very sharp rigid spine. *Calyx* urceolate, narrow at the base, and widening upwards, striate, slightly pubescent, 5 or sometimes 7-toothed, the teeth sharp and spiny, fringed with short hairs, the two lower ones longest and spreading. *Corolla* 2-lipped, pubescent, upper lip nearly flat, spathulate, villous outside, with a dense tuft of wool a little below the point, of a pale lilac colour; lower lip 3-lobed, side lobes small and reflexed, middle lobe large and very broad, of a dark purple, the sides reflexed. *Stamens* 4, inserted in the throat, 2 rather longer than the others: *filaments* hairy: *anthers* 2-lobed, lobes parallel. *Style* slender, pubescent. *Stigma* bifid. *Seeds* 4, triangular, of a glossy brown colour.

This pretty annual plant was raised from seed at the Nursery of Mr. Colvill, where our drawing was made in the Autumn of 1825; the seeds were given him by Mr. White, who received them from the Brazils; and we are informed by Mr. George Don, that it is very plentiful there, and also in the different West Indian islands that he has visited. It succeeds very well with the treatment of the half hardy annuals, to be sown on a hot-bed or in the Greenhouse; and when of a sufficient size to be planted out in the flower borders, where they will continue to flower all the Summer, and will ripen abundance of seeds; or if it is not convenient to raise them according to this method, the seeds may be sown on a south border, they will then flower later in the season, but if the Summer proves favourable they will succeed very well.

1. Outline of a radical leaf. 2. Calyx. 3. Corolla spread open, to show the insertion of the Stamens. 4. Stamen detached, to show its pubescent filament. 5. The 4 seeds terminated by the Style and bifid Stigma.

R.H. Smith Del. Pub. by E. Pond, April 1827. Wed. del. lith. Sc.

MANDRAGORA præcox.

Early-flowering Mandrake.

Natural Order. SOLANEÆ. *Brown prodr.* 1. *p.* 443.

Tribus I. Corolla limbo sæpiùs plicato. Stamina numero laciniarum. Embryo valde curvatus. *Brown loc. cit. p.* 444.

A. *Pericarpium baccatum.*

MANDRAGORA. Calyx turbinatus, 5-fidus. *Corolla* campanulata, 5-fida. *Stamina* 5; imæ corollæ inserta; filamentis basi dilatatis et conniventibus, apice filiformibus divaricatis. *Germen* basi biglandulosum; *stigma* capitatum sulcatum. *Bacca* carnosa, solida, unilocularis, polysperma. *Semina* reniformia, serie simplici (peripherica.)—Herbæ *macrorhizæ; folia radicalia; scapi inter folia conferti* 1-*flori.*

M. *præcox,* foliis lanceolato-oblongis obtusis undulatis bullato-rugosis villoso-pubescentibus cum floribus nascentibus, scapis unifloris aggregatis, calycis laciniis lanceolatis acutis carinatis, laciniis corollæ reflexo-patentibus.

Mandragora præcox. *Swt. hort. brit. p.* 298.

Atropa Mandragora. β. fol. minoribus angustioribus et magis undulatis. *Lam. encycl.* 1. *p.* 391. *Pers. syn.* 1. *p.* 218.

Root large, fusiform, often forked. *Leaves* springing from the root at the same time as the flowers, narrower than in M. *vernalis*, lanceolately-oblong, bluntish, very much undulate, and ruggedly blistered, clothed with long deciduous down, particularly underneath, at the base, and on the nerves; of a glossy green on the upper side, and pale dull green on the lower. *Petioles* broad and flat on the upper side, bluntly keeled on the lower, densely clothed with long villous down. *Scapes* numerous, 1-flowered, aggregate, shorter than the leaves, gradually thickening upwards, very thick and slightly angular just below the calyx. *Calyx* 5-cleft, villous, purple at the base; segments erect, acute, strongly keeled down the back. *Corolla* campanulate, thickly clothed with a dense wool: of a yellowish brown, tinged with blue, more than double the length of the calyx: segments

lanceolate, acute, strongly 3-nerved at the back, spreading, the points slightly reflexed. *Stamens* 5, inserted in the corolla, a little above the base, where they are connivent, the points spreading: *filaments* dilated at the base, and densely bearded, the upper part smooth and slender; *anthers* bluntly sagittate, attached to the filaments a little above the base. *Pollen* cream-coloured, granular. *Germen* smooth and glossy, with 2 yellow transparent glands at the base. *Style* smooth, rather longer than the stamens. *Stigma* capitate, oblong, 2-lobed, slightly papillose.

Several species of this genus appear to have been confused under the names of M. *officinalis* or *Atropa Mandragora*; the present plant was first raised from seed, received from Switzerland, by Mr. William Anderson, at the Apothecaries' Company's Garden at Chelsea; it differs greatly from M. *vernalis* of Sprengel, by flowering about two months earlier, the leaves are also not half the size, and the plant altogether much smaller: we hope to procure a figure of that species this Summer.

Our drawing was taken about the middle of March, 1826, when the plants were in full bloom; they succeed well in a light rich soil, but require a little covering in Winter, or the roots are liable to rot, though it is much hardier than M. *vernalis*, which will not bear our severe Winters, without being well covered in sharp frosty weather.

The plants of this genus are very interesting, being supposed to be the Mandrakes mentioned in the 30th chapter of Genesis, which Reuben found in the wheat-field, and brought to his mother Leah. Seeds ripen in abundance, if some pollen be attached to the stigma when in bloom.

1. Calyx. 2. Corolla spread open, to show the insertion of the Stamens. 3. Stamen detached. 4. Germen, terminated by the smooth Style and 2-lobed Stigma.

Pub. by S. Howard, April 1817.

ORCHIS Schleicheri.

Schleicher's Orchis.

Natural Order. ORCHIDEÆ. *Brown prodr. p.* 309.
ORCHIS. Supra fol. 65.

O. *Schleicheri*, bulbis subpalmatis, scapo folioso, labello obsolete trilobo undulato integerrimo, calcare conico, foliolis perianthii exterioribus lateralibus reflexis, bracteis lanceolatis flore subæquantibus.
Orchis Schleicheri. *Swt. hort. brit. p.* 382.
Orchis sambucina. *var.* rubra. *Schleicher's Mss.*

Bulbs large, flattish, slightly palmate, or producing a few short blunt points at the end; when young white, but becoming brown by age, producing a few thickish fibres at the summit, close to the stem. *Leaves* lanceolate, acute, keeled below and channelled above, smooth and glossy, sheathing the stem, the margins slightly tinged with brown, and curved inwards. *Scape* short, in our specimens not a span high, angular, smooth and glossy, the upper part tinged with bluish purple. *Spike* short, few-flowered. *Bractes* lanceolate, acute, about the length of the flowers, margins and upper side of a pale purple, and greenish underneath. *Flowers* purple, different in colour on different plants, in some altogether purple, others are marked with yellow on the labellum, and dotted with small purple spots. *Germen* angular, twisted, a very little longer than the spur. *Leaflets of the Perianthium* lanceolately ovate, acute; two outer side ones reflexed; three upper ones connivent, and arched over. *Labellum* broad, nearly round, very slightly three-lobed near the point, the margins undulate, but scarcely crenulate, the point entire, not emarginate. *Spur* conical, nearly as long as the germen, the point

curved outwards, obtuse, of a light purple. *Pollen-masses* ash-coloured, pedicelled, and enclosed within a membranaceous hood.

Several bulbs of this species were received by Mr. Colvill from the late Mr. Schleicher, who collected them in Switzerland, and sent them under the name of O. *sambucina* β *rubra*, but it is certainly very different from that species, and we can find no description or figure that agrees with it in any work that we have had an opportunity of examining; the bulbs succeeded well in small pots in an equal portion of light loam, peat, and sand, and flowered the latter end of April and beginning of May last, when our drawing was made. It appears to be one of the sorts that is not difficult of cultivation, and we have no doubt but it would thrive well in the meadows of Kent and Surry, in the same situations as O. *morio* or O. *latifolia*, where it would probably soon become naturalized. It might also be cultivated with advantage in a frame, in the way that we have already recommended for some of the other species, the lights only to be kept on in very wet or severe frosty weather, where we have no doubt but many species would ripen their seeds, and produce young plants in abundance, if the ground was not disturbed too often, which would infallibly destroy them.

1. Germen. 2. The 5 leaflets of the Perianthium. 3. Labellum, with the long spur at its base. 4. Anther, its two pedicelled pollen masses detached from the lobes, each seated on a little gland at the base.

E.D. Smith Del. Pub. by R. Sweet. April 1. 1827. Weddell Sc.

DAPHNE hybrida.

Hybrid Daphne.

Natural Order. THYMELÆÆ. *Brown prodr.* 1. *p.* 358.
DAPHNE. Perianthium infundibuliforme, limbo 4-fido, marcescens. *Stamina* 8, inclusa. *Stylus* terminalis. *Stigma* capitatum. *Drupa* baccata, nuda, putamine crustaceo.—Frutices *v.* Arbusculæ. Folia *sparsa v. opposita.* Flores *axillares v. terminales, sæpiùs glomerati.* Brown prodr. 1. p. 362.

D. *hybrida,* floribus terminalibus congestis subsessilibus sericeo-hirsutis: laciniis perianthii ovatis acutis margine erosis, foliis alternis oblongo-ellipticis acutiusculis brevi pedunculatis supra glabris nitidis subtus pubescentibus, ramis adultis glabris: junioribus pubescentibus.
Daphne hybrida. *Colv. catal. edit.* 3. *p.* 35. *col.* 2.

Stem shrubby, branching: *branches* cylindrical, when young clothed with a brown pubescence, which wears off by age; older branches smooth, and clothed with a brown bark. *Leaves* alternate, with very short flat footstalks, oblongly elliptic, gradually tapering to the base and point, the margins smooth and entire, of a bright glossy green, and smooth on the upper side; the lower side of a pale yellow green, and pubescent. *Flowers* numerous, terminal, in a very close crowded head, flesh-coloured, darkest on the outside, agreeably scented. *Bractes* deciduous, elliptic or lanceolate, concave, silky. *Pedicles* very short, sericeous. *Perianthium* tubular, 4-cleft, the tube clothed with close pressed silky hairs, bluntly quadrangular; *laciniæ* about the length of the tube, ovate, acute, the margins slightly curved inwards, undulate, and erose, slightly clothed underneath with a silky pubescence, the two inner ones eared on each side at the base. *Stamens* 8, inserted in the tube, 4 near the mouth, and 4 lower down in the tube; *filaments* very

slender, inserted in the back of the anthers near the base: *anthers* two-lobed: *pollen* orange-coloured. *Germen* oval, sericeous. *Stigma* large, capitate, nearly sessile.

Our drawing of this beautiful Daphne was made at the Nursery of Mr. Colvill, where it was in flower in February, but that was owing to its being protected under glass; and when grown in the open air, it will probably flower in April. It has lately been received from France under the name of the Dauphin's Daphne, and is without doubt of hybrid origin, and intermediate between D. *odora* and D. *collina;* it is certainly a very desirable Evergreen Shrub, as its flowers are sweet scented as well as beautiful; we would advise its being grown by the side of a south wall, where it can be protected a little in severe weather; it succeeds well in a light sandy soil, and is readily increased by grafting or inarching on the common wood or spurge Laurel, D. *laureola;* and it will certainly soon become a favourite ornament of the flower-garden.

1. Two of the deciduous bractea, to show their difference. 2. Tube of the Perianthium spread open, to show the insertion of the stamens. 3. One of the inner segments, to show its ears at the base. 4. Stamen. 5. The pubescent Germen, terminated by a large nearly sessile Stigma.

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